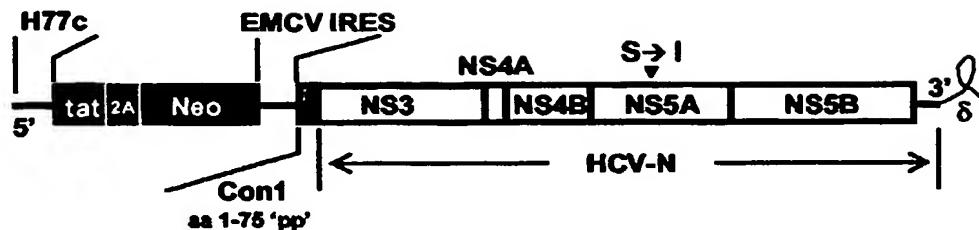
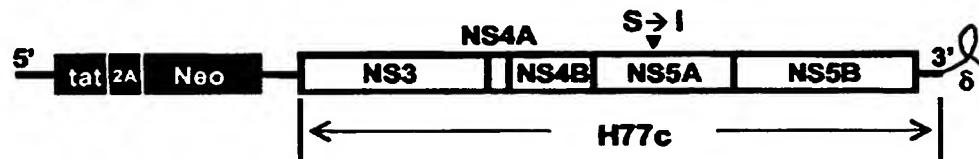
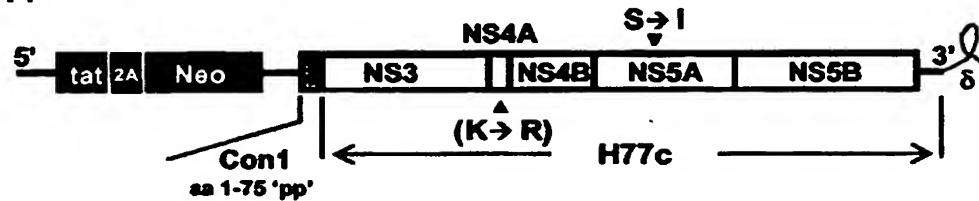
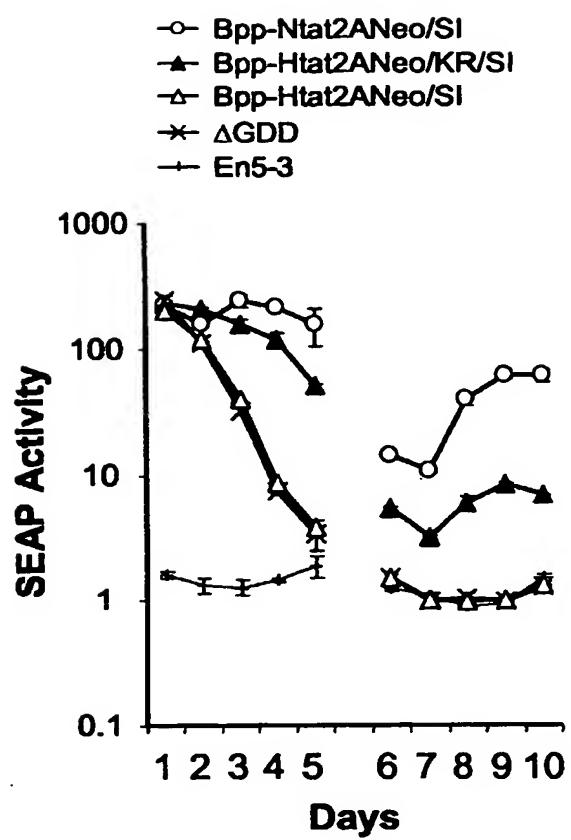


1/38

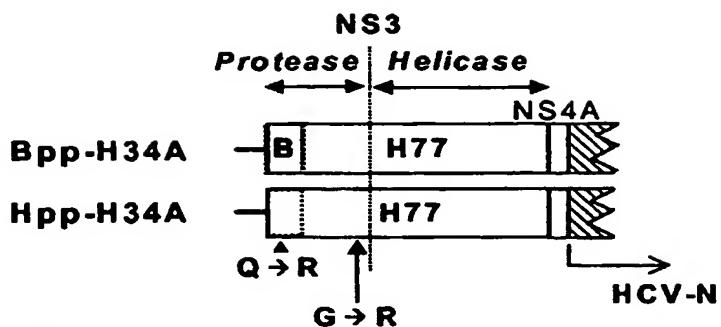
*Fig. 1***Bpp-Ntat2ANeo/SI****Htat2ANeo/SI****Bpp-Htat2ANeo/SI**

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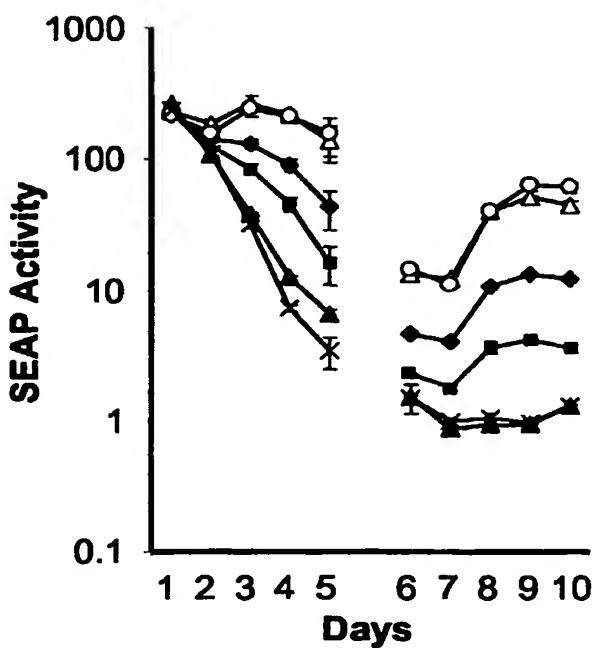
2/38

*Fig. 2*

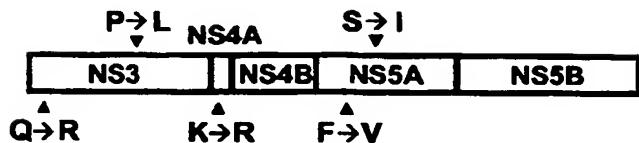
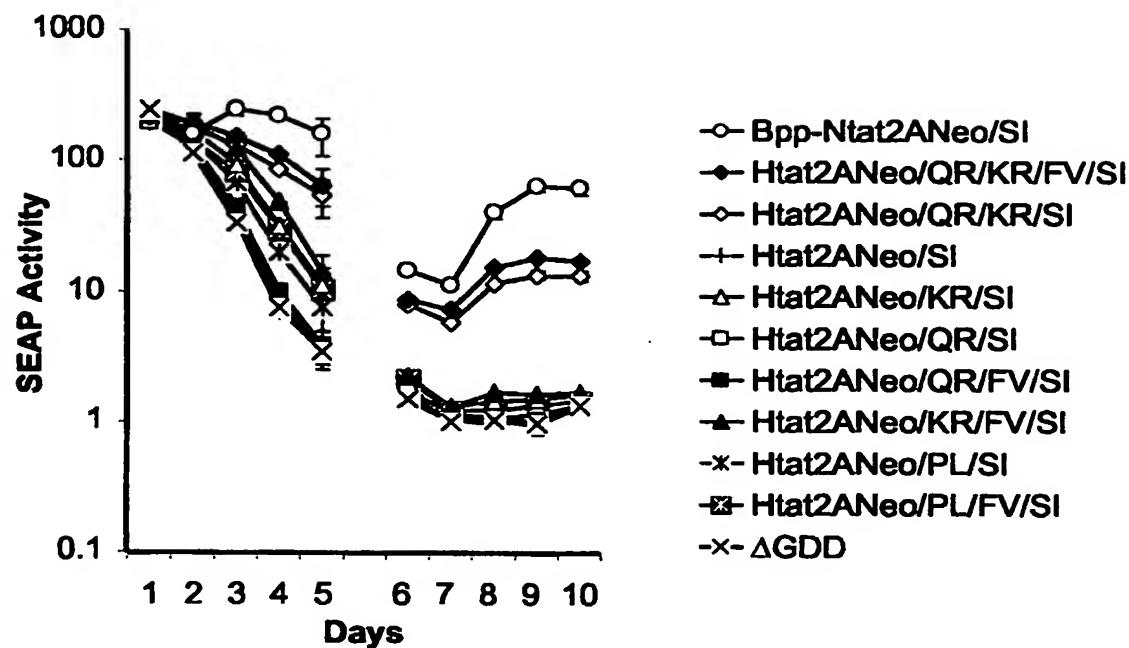
3/38

*Fig. 3A**Fig. 3B*

- Bpp-Ntat2ANeo/SI
- △— Bpp-H34A-Ntat2ANeo/SI
- Hpp-H34A-Ntat2ANeo/QR/SI
- Hpp-H34A-Ntat2ANeo/GR/SI
- ▲— Hpp-H34A-Ntat2ANeo/SI
- x- ΔGDD

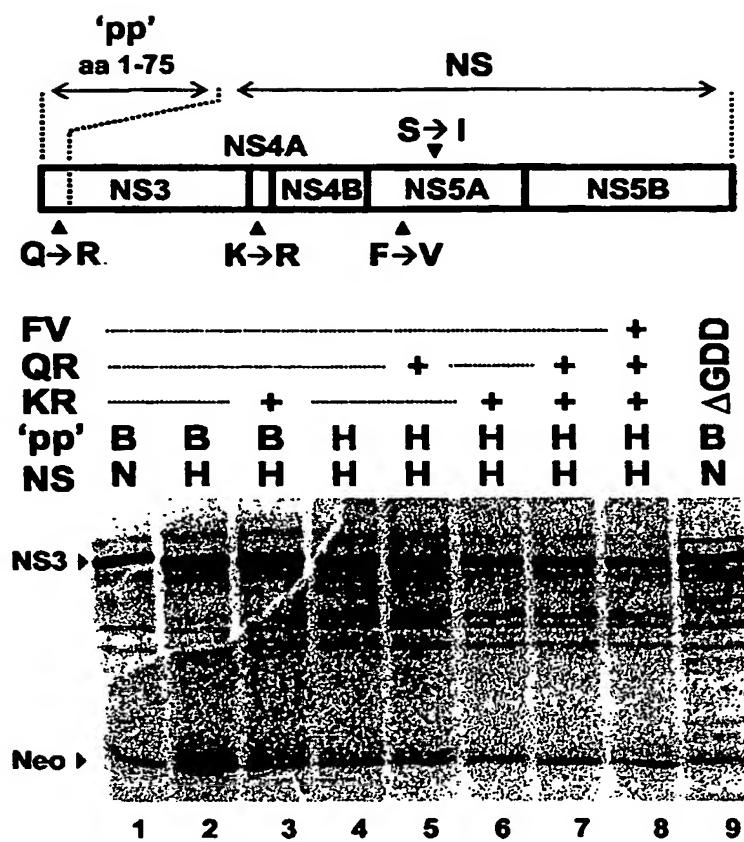


4/38

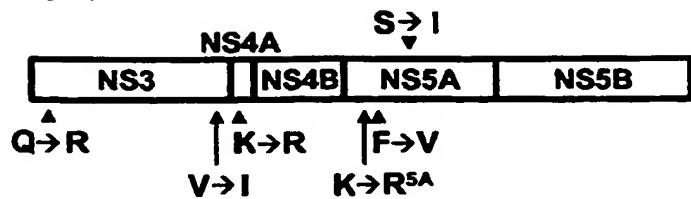
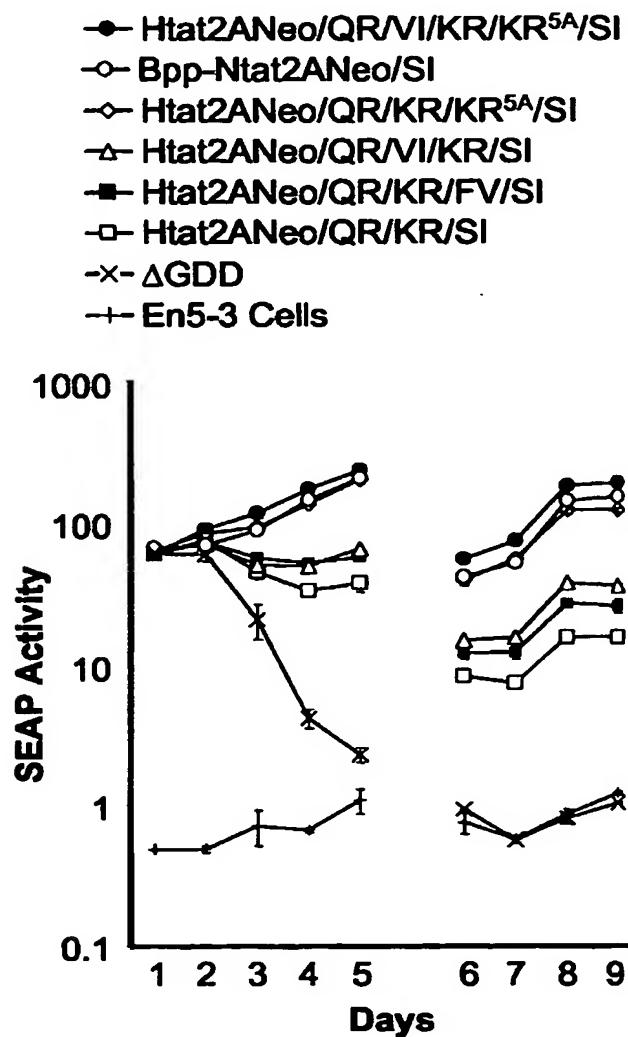
*Fig. 4A**Fig. 4B**Fig. 4C*

SEAP	NS Substitutions				
	3p	3h	4A	5A	5A
-					SI
-			KR		SI
-	QR				SI
+++	QR		KR		SI
-	QR			FV	SI
+			KR	FV	SI
+++	QR		KR	FV	SI
+		PL			SI
+	PL		FV	SI	

5/38

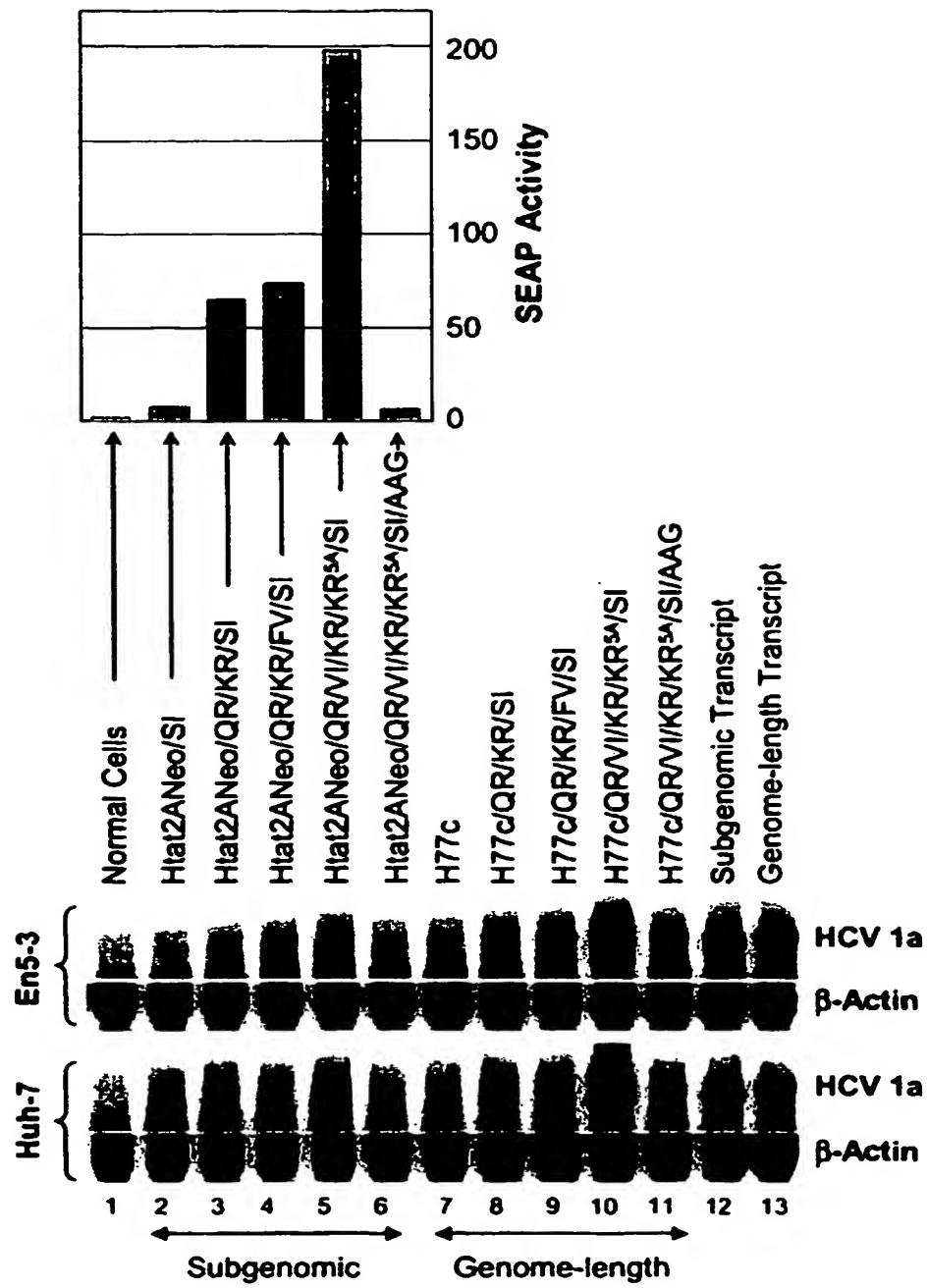
*Fig. 5*

6/38

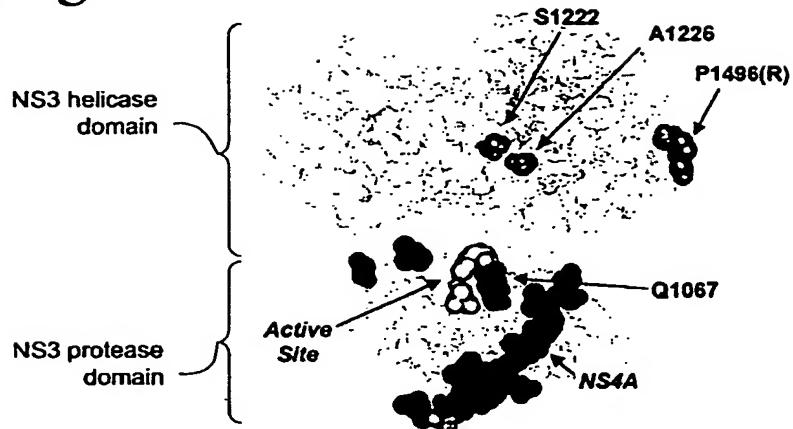
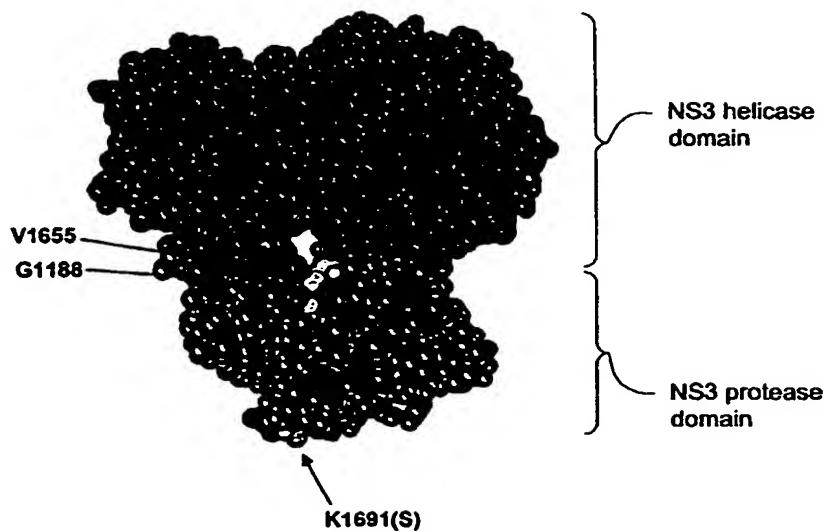
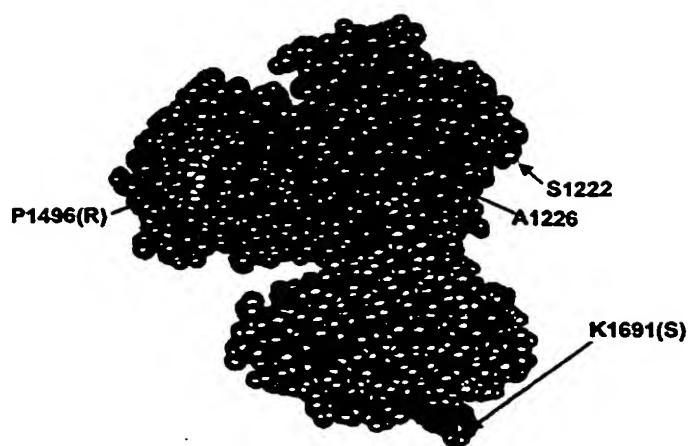
*Fig. 6A**Fig. 6B*

7/38

Fig. 7



8/38

*Fig. 8A**Fig. 8B**Fig. 8C*

9/38

Fig. 9

1	ACCTGGAAA	ACATGGGCA	ATCACAAAGTA	GCAATACAGC	AGCTACCAAT	GCTGCTTGTG	CCTGGCTTAGA	AGCACAAAGAG	80
81	GAGGAGGAGG	TGGGTTTTC	AGTCACACCT	CAGGTACCTT	TAAGACCAAT	GACTTACAAG	GCAGGTGTAG	ATCTTAGCCA	160
161	CTTTTAAAAA	GGAAAGGGGG	GAATGGAAAGG	GCTAATTCA	TCCCAAAGAA	GACAAGATAAT	CCTTGATCTG	TGGATCTTAC	240
241	ACACACAAGG	CTACTTCCT	GATTAAGCAGA	ACTACACACC	AGGCCAGGG	GTCAGATATC	CACTGACCTT	TGGATGGTGC	320
321	TACAAAGCTAG	TACCAAGTGA	GCOAGATAAG	ATAGAACAGG	CCAAATAAAGG	AGAGAACACC	AGCTTGTAC	ACCCCTGTGAG	400
401	CCTGGCATGG	ATGGATGACC	CGGAGAGAGA	AGTGTAGAG	TGAGGTTTTC	ACAGCCGCCT	ACCATTCAT	CACGTGGCCC	480
481	GAGAGCTGCA	TCCGGAGTAC	TTCAGAGAACT	GCTGACATCG	AGCTTGCTAC	AAGGGACTTT	CAGCTGGGGA	CTTTCCAGGG	560
561	AGGCCTGGCC	TGGGCGGGAC	TGGGAGTGG	CGAGCCCTCA	GATCCTGCA	ATAAGCAGCT	GCTTTTTGCC	TGTACTGGGT	640
641	CTCTCTGTT	AGACCAAGTC	TGAGCCTGGG	AGCTCTCTGG	CTAACTAGGG	AACCCACTGC	TAAAGCCTCA	ATAaaagcttc	720
721	TGCAATGCTGC	TGCTGCTGCT	GCTGGCTGGG	CTGAGGCTAC	AGCTCTCCCT	GGGCATCCTC	CGAGTTGAGG	AGGAGAACCC	800
801	GGACTTCTGG	AACCCGGAGG	CAGCCGAGGC	CCTGGGTGCC	GCAAGAAGC	TGCCAGCCTGC	ACAGACAGCC	GCCAAAGAAC	880
881	TCATCATCTT	CCTGGGCGAT	GGGATGGGG	TGTCTACGGT	GACAGCTGTC	AGGATCCTAA	AAGGGAGAAA	GAAGGACAAA	960
961	CTGGGGCCTG	AGATACCCCCT	GGCCATGGAC	CGCTTCCCAT	ATGGGGCTCT	GTCCAAGACA	TACAATGTAG	ACAACATGT	1040
1041	GCCAGACAGT	GGAGCCACAG	CCACGGGCTA	CCTGTCGGG	GTCAAGGGCA	ACTTCAGAC	CATTGGCTTG	AGTGAGCCG	1120
1121	CCCGCTTAA	CCAGTGCAC	ACGACACGCG	GCAACGAGGT	CATCTCCGTG	ATGAATCAGGG	OCAAGAACG	AGGGAACTCA	1200
1201	GTGGGAGTGG	TAACCACAC	ACGAGTGCAG	CACGCCCTGC	CAGGCCGAC	CTACGCCAC	ACGGTGAAAC	GCAACTGGTA	1280
1281	CTCGGACGCC	GACGTGCCCTG	CCTGGGCCCG	CCAGGGGG	TCGCCAGACA	TGCTACGCA	GCTCATCTCC	AACATGGACA	1360
1361	TTGACGTGAT	CCTAGGTGGA	GGCCGAAAGT	ACATGTTTC	CATGGGAACC	CCAGAACCTG	AGTACCCAGA	TGACTACAGC	1440
1441	CAAGGTGGG	CCAGGCTGGG	CGGGAAAGAA	CTGGTGCAGG	ATTGGTGGC	GAAGGGCCAG	GCTGGCCGGT	ATGTTGGAA	1520
1521	CCGCACTGAG	CTCATGCA	CTTCCCTGGA	CCCCTCTGTG	ACCCATCTCA	TGGGCTCTCT	TGAGGCTGTGA	GACATGAAAT	1600
1601	ACGAGATCCA	CCGAGACTCC	ACACTGGACC	CCTCCCTGTAT	GGAGATGACA	GAGGCTGTGCC	TGGGCTGTGCT	GAGCAGGAAC	1680
1681	CCCCGGGCT	TCTTCCTCTT	CGTGGGGGT	GGTCGCATG	ACCATGGTC	TCAATGAAAGC	AGGGCTTAC	GGGACTGTAC	1760
1761	TGAGACGATC	ATGTTGACAG	ACGCCATTGA	GAGGGGGGG	CAGCTCACCA	GGGAGGAGGA	CACGCTGAGC	CTCGTCACTG	1840
1841	CCGACCACTC	CCACGTCTTC	TCCTTCGGAG	GCTACCCCT	GCGAGGGAGC	TCCATCTTCG	GGGTGCCCC	TGGCAAGGCC	1920
1921	CGGGACAGGA	AGGGCTACAC	GGTCCCTCTA	TACGGAAACG	GTCCAGGCTA	TGTGCTCAAG	GACGGGATGT	GGGGGGGCC	2000
2001	TACCGAGAGC	GAGACCGGGA	CCCCCGAGTA	TGGGAGGAG	TCAGGAGTGC	CCCTGACGGA	AGAGACCCAC	GCAGGGGAGG	2080
2081	ACGTGGGGT	GTTCGGGCGC	GGCCCGCAGG	CGCACCTGGT	TGAGGAGAGA	CCTTCATAGC	GCACGTCA	2160	
2161	GCCTTCCGGG	CCTGCTGGGA	GGCCCTACACC	GGCTGGGCCCC	CGCCGGCACC	ACCGGACGCC	CGCACCCCCG	CGCACCCCCG	2239
	10	20	30	40	50	60	70	80	

10/38

*Fig. 10A*

1 TGAAAGGTTGG GGTAAACACT CCGGCCTCTT AAGCCATTC CTGGTTTTT TTTTTTTTT TTTTTTTT TTTCTTCCTT TTCCTTCCTT  
 101 TTTTCCTTTC TTTTCCTT CTTAATGGT GGCTCCATCT TAGCCCTAGT CACGGCTAGC TGTGAAAGGT CCGTGAGCCG CATGACTGCA GAGAGTGTG  
 201 ATACTGGCCT CTC TGCA GAT CAT GT

*Fig. 10B*

1 GCGAGCCCCC TGATGGGGC GACACTCCAC CATGAATCAC TCCCCTGTGA GAAACTACTG TCTTCACGCA GAAAGCGCT AGCCATGGCG TTAGTATGAG 100  
 101 TGTCGTGCCAG CCTCCAGGAC CCCCTCCC GGGAGGCCA TAGTGGTCTG CGGAACCGGT GAGTACACCG GAATTGCCAG TCCTTTCTTG 200  
 201 GATAAACCCG CTCAAATGCCCT GGAGATTTGG GCGTCCCCC GCAAGACTGC TAGCCGGAGTA GTGGGGTACT GCCTGATAAGG 300  
 301 GTGCTTGCAGA GTGCCCCGGG AGGTCTCGTA GACCGTGAC C

11/38

## Fig. 11A-1

1	10	—	20	—	30	—	40	—	50	—	60	—	70	—	80	—	90	—	100	
101	TGTCGTGAG	CCTCCAGGAC	CCCTCCCCC	GACACTCCAC	CATGAATCAC	TCCCCTGTGA	GGAACTACTG	TCTTCAGCA	GAAGCGTCT	AGCCATGGGG	TTAGTATGAG	100								
201	GATAAACCG	CTCAATGCC	GGGATTTGG	GGGGAGGCCA	GGGGAGGCCA	TGAAGACTGC	GGAAACCGGT	GAAATGCCG	GTGTTGGTACT	GCCTGATAGG	TCCTTTCCTG	200								
301	GTGCTGCA	GTGCCCCGG	AGGTCTGCA	GACCGTGCA	CATGAGCAC	AATCTTAAC	CTCAAGAAA	AACCAAACGT	AACCAAAC	GTGCCGCCACA	400									
401	GAACGCTAAG	TGCCCCGGG	GGGGTGCA	GGGGTGCA	GGGGTGCA	GGGGTGCA	GGGGCGGAG	GGGGCGGAG	GGGGCGGAG	GGGGCGGAG	GGGGCGGAG	500								
501	GAAGGGTGC	AAACCTGAGG	TAGAGCTCAG	CCTATCCCCA	AGGCCAGTC	CCGTGGCTC	GGGGAGGGG	GGGGAGGGG	GGGGAGGGG	GGGGAGGGG	GGGGAGGGG	600								
601	GCAATGAGG	TTGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	700								
701	TAAGGTCACT	GATAACCCTA	CGTGGGGCCTT	CGCCGACCTC	ATGGGTACA	TACCGCTCGT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	800								
801	GGCGTCCGG	TTCTGGGAGA	GGGGCTGAAC	TATGCCAACAG	GGGACCTTCC	TGTTGCTCT	TTCTCTATCT	TTCTCTATCT	TTCTCTATCT	TTCTCTATCT	TTCTCTATCT	900								
901	TGCCCGCTTC	AGGCCATCCA	GTGGGCAATT	CCTCGGGGG	TTACCATGTC	GGGCTTGGGT	GGGTTGGGT	GGGCTTGGGT	GGGCTTGGGT	GGGCTTGGGT	GGGCTTGGGT	1000								
1001	CCTGCACACT	CCGGGGGTGT	TCCCTTGCGT	TCGGGAGGG	AAAGCTCGA	GGGCTTGGT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1100								
1101	CCACAAACGC	AGCTTGACG	TCATATCGAT	CTGCTTGTG	GGAGGCCAC	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1200								
1201	TGGTCACT	GTATTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	TCTTACCTC	1300								
1301	GGATATGATG	ATGAACTGGT	CCCTCTAACG	AGGCTAACGG	AGGCTAACGG	GTAGCTCAGC	GGCTCCAGGC	GGCTCCAGGC	GGCTCCAGGC	GGCTCCAGGC	GGCTCCAGGC	1400								
1401	GGAGTCCCTGG	CGGGCATAGC	GTATTCTC	ATGGTGGGG	ACTGGGGAA	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1500								
1501	TCACCGGGGG	AAATGCGGGC	CGCACACCGG	CTGGGGGG	CTGGGGGG	CTGGTCTCCT	GGGCTTGGT	GGGCTTGGT	GGGCTTGGT	GGGCTTGGT	GGGCTTGGT	1600								
1601	GCACATCAAT	AGCACGGCCT	TGATTTGGAA	TGAAGGGCT	AACACGGCT	GGTAGCAGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1700								
1701	GAAGGGTGG	CCAGCTGGCG	GGGGCTAACG	GGGGCTAACG	GGGGCTAACG	GGGGCTAACG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1800								
1801	GGCATACCC	TCCAAAGCTC	TGTCGCTTGT	TGTCGCTTGT	TGTCGCTTGT	TGTCGCTTGT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	1900								
1901	CAAGCTGGGG	GGCCCTACCT	ACAGCTGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2000								
2001	TGGATGAACT	CAACTGGATT	CACCAAAGTG	TGCGGAGGC	CCCCCTGGT	TGCGGAGGC	CCCCCTGGT	CCCCCTGGT	CCCCCTGGT	CCCCCTGGT	CCCCCTGGT	2100								
2101	GAAAACATCC	GGAAAGCCACA	TACTCTCGGT	GGGGCTCCGG	GGGGCTCCGG	TCCCTGAGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2200								
2201	TACCATCAAT	TACACCATA	TCAAAGTCAG	GGATGTAAGTG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2300								
2301	CTGGAAGACA	GGGACAGGGC	CGAGCTCAGC	CGGTGGCTGC	TGTCGCTGCA	GTACTGGTAC	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2400								
2401	CGGGCCTCAT	CCACCTCCAC	CAGAACATTG	TGGACGTGCA	TGGACGTGCA	TGGTGTGGA	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2500								
2501	TCTCTCTGTC	CTTCTGCTG	CAGACGCCG	CCTCTGCTC	CGGGCGCG	CGGGCGCG	CCTTCTCGT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2600								
2601	CTCATGTCAG	CATCCCTGGC	CGGGCGCAC	GGGGCGCAC	GGGGCGCAC	GGGGCGCAC	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	2700								
2701	TCTACGCCCC	CTACGGGATG	TGGCTCTCTC	TCTCTGCTC	TCTCTGCTC	TCTCTGCTC	GCTCAGGGGG	CATAGCCT	CATAGCCT	CATAGCCT	CATAGCCT	2800								
2801	CGTGTGTTCT	GTGGGGTTAA	TGGGGGTAA	TCTGTCGCTAC	TATTACAGC	TATTACAGC	GCTATATCAG	TGTTGCTAG	TGTTGCTAG	TGTTGCTAG	TGTTGCTAG	2900								
2901	GAAGGCACAC	TGACGGCAC	TGACGGCAC	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3000								
3001	ACATCACTAA	ACTACTCTG	GGCATCTTGTG	GACCCCTTGTG	GACCCCTTGTG	GACCCCTTGTG	GATTCCTCAA	GGAGGCTCT	GGAGGCTCT	GGAGGCTCT	GGAGGCTCT	3100								
3101	GAATCTGCG	CTAGCGGGG	AGATAGCGGG	AGTCATTCAC	GTGCAATATG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3200								
3201	ACCCCTCTTC	GAGACTGGGG	GCACACGCC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	TGCGGAGATC	3300								
3301	GGGAGAGATA	TGGCGGCTGC	CGCCGGCTGC	CGTGAACATCA	TCAACGGCT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3400								
3401	CAAGGGGTGC	AGGGTGTGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3500								
3501	CAAGGGTGGG	GTGAGGGCCA	GTAGCTGTC	ACTGCTACCC	AAACCTTCCT	AAACCTTCCT	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3600								
3601	CGAGGACCAT	CGCATCACCCC	AAAGGGTCTG	TGTCGCTGCA	GTATCCAGAT	GTATCCAGAT	GTATCCAGAT	GTATCCAGAT	GTATCCAGAT	GTATCCAGAT	GTATCCAGAT	3700								
3701	GAACCCCTGT	ACCTGGGGCT	CCTCGGACCT	TTACCTGGTC	ACGAGGACAG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	3800								
3801	TGCCCCGGG	CCATTCTCTA	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	CTTGAAGGGC	3900								
3901	GTGGAGTGGC	TAAGGGGG	TGACTTTATCC	TGCTGGAGAGA	CCTAGGGAGACA	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	GGGGGGGG	4000								
4001	CCAGAGCTTC	CAGGTGGCCC	ACCTGCTATGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	TCCCACCGGGC	4100								

12/38

## Fig. 11A-2

4101	CTCAACCCCT	CTGTTGGTGC	AACGGCTGGG	TITGGTGCCT	ACATGTCCAA	GGCCCCATGGG	GTTGATCCTA	ATATCAGGAC	CGGGGTGAGGA	ACAATTACCA	4200
4201	CTGGCAGCCC	CATCACGGTC	TCCACCTACG	GCAAGTTCCT	TGCCGAAGGG	GGGTGCTCAG	TGACATAATA	TTTGTGACG	AGTGCCTACTC	4300	
4301	ACGGATGCGC	ACATCCATC	TGGGATCAGG	CACTGCTCT	GACCAAGCAG	GGGAGACTG	TTGGTGTCTG	CACTGCTCG	CCCTCCGGG	4400	
4401	TCCGTCATCG	TGTCCTATCC	TAACATCGAG	GAAGGGCTCT	TGTCACCOAC	CCCTTTACG	GAAGGCTAT	CSCCTCTGAG	GTGATCAAGG	4500	
4501	GGGAAAGACA	TCTCATCTTC	TGCCACTCAA	AGAAGAAAGTC	CGACGAGCTC	TGGTCGCAAT	GGGGCTCAAT	GGCGTGGGCT	ACTACCGCGG	4600	
4601	TCTTGACCTG	TCTGTCTATCC	CGACCAAGGG	CGATGTTGTC	TGTCGTTGCA	CATGACTGGC	TTTACAGGGG	ACTTTCGACTC	TGTGATGAGC	4700	
4701	TGCAACACGT	GTGTCATCTCA	GACGTCGAT	TTCAGCCTTG	ACCCATACCT	TACCATGGAG	TCCCCCAGGA	TGCTGTCTTC	AGGACTCAAC	4800	
4801	GGCGGGGAG	GACTGGCAGG	GGGAGGCCAG	GCATCTATAG	ATTGGGGCA	GGGGGGAGC	CATGTTCGAC	TCTGTCGTC	TCTGTGAGTG	4900	
4901	CTATGACGGG	GGCTGTGCTT	GCTGTGAGCT	CACGCCGCGC	GAGACTACAG	TAGGCTACG	AGCGTACATG	AACACCCGG	GGCTTCCCGT	GTGCCAGGGC	5000
5001	CATCTTGAA	TTTGGGAGGG	CCTCTTACG	GGCCTCACTC	ATATAGATGC	CCACTTTTA	TCCCCAGAAC	AGCAGAGTGG	GGAGAACTT	CCTTACCTGG	5100
5101	TAGCGTACCA	AGCCACCGTG	TGCCCTAGGG	CTCAAGCCCC	TCCCCATCG	TGGGACCGA	TGTGGAGTG	TTTGTGATCCG	CTTAACCCA	CCCTCCATGG	5200
5201	GCCAAACCCC	CTGCTATACA	GACTGGGCGC	TGTCAGAAT	GAAGTCACTCC	TGACGCACCC	AATACACAA	TACATCATGA	CATGCCATGTC	GGCCGACCTG	5300
5301	GGGGTGGTCA	CGAGGACCTG	GGTGTCTGTT	GGGGGGGTCT	TGGCTGTCT	GGCCGCGTAT	TGCCGTGTC	CAGGTGTCGT	GTTCACTAGTG	GGCAGGGATCG	5400
5401	TCTTGTCCGG	GAAGGGGGCA	ATTATACCTG	ACAGGGAGGT	TCTCTACCAAG	GAGTTCGATG	AGATGGAAAGA	GTGCTCTCAG	CACTTACCGT	ACATCGAGCA	5500
5501	AGGGATGTAG	CTCGGTGAGC	AGTCAAGCA	GAAGGCCCTC	GGCCTCTCTG	AGACCGCGTC	CGGCCATGTC	GAGGTATACA	CCCTCGTGT	CCAGACCAAC	5600
5601	TGGCAGAAC	TGGAGGTCTT	TGGGGGAAAG	CACTATGGGA	ATTTCATCAG	TGGGATACAA	TACTTGGGG	GCCTGTCAAC	GCTGCCTGGT	AACCCCGCCA	5700
5701	TGCTTCAT	GATGGCTT	ACAGCTGCCG	TCACCAAGCC	ACTAACACT	GGGAAACCC	TCTCTTC	CATATGGGG	GGGTGGGTGG	CTGCCCAAGT	5800
5801	CGGGCCCCCC	GGTGGCCGCTA	CTGGCTTGT	GGGTGCTGGC	CTAGTGGCG	CGGCCATCTGG	CAGCGTGGAA	TCTCTGTTG	CATCTCTGCA	5900	
5901	GGGTATGGC	CGGGGGCTGGC	GGGGGCTCTT	GGGTGCTGGC	CTAGTGGCG	CGGTGAGGG	CCCTCCACGG	AGGACCTGGT	CCCCGCCATCC	6000	
6001	TCTCGCTGG	AGGCCCTGTGA	GTCCGGTGTG	TCTGCGCAGC	AAATAGTGGC	CGGCACGTTG	GGCGGGGCGA	GGGGCAGTGTG	CAATGGATGA	ACCGGGCTAT	6100
6101	AGCCCTTCGCC	TCCCCGGGGG	ACCTGTCTTC	CCCCACGCAAC	TACGTGGCGG	AGAGCGATGC	AGCCGGCCGC	GTCACATGCCA	TACTCAGCGG	CCTCACTGTA	6200
6201	ACCCAGCTCC	TGAGGGGACT	GGCATCTAGTG	ATAAAGCTGG	AGTGTACACC	TCACTGCTCC	GGTCTCTGGC	TAAGGGACAT	CIGGGGACTGG	ATATGGAGG	6300
6301	TGCTGAGCA	CTTAAAGACC	TGGGTGAAG	CCAAGCTCAT	GCCACAACCTG	CTCTGGGATC	CCTTTGGTGT	CTGCAGCGC	GGGTATAGGG	GGGTCGGGG	6400
6401	AGGAGCGGC	ATTATGACA	CTCGGTGCCA	CTGTGGAGGT	GAGATOACTG	GACATGTCA	AAACGGGAGC	ATGAGGATCG	TGGGTCTTAG	GACCTGGAGG	6500
6501	ACATGTGG	GTGGGACGTT	CCCCATTAAAC	CCCTACACCA	CGGGCCCTG	TACTCCCTT	CCTGGCCCGA	ACTATAAGTT	CGCGCTGTGG	AGGGTGTCTG	6600
6601	CAGAGGAATA	CGTGGGAGATA	AGGGGGTTGG	GGGACTTCCA	CTACGTATCG	GGTATGACTA	CTGACAATCT	TAATGGCCCC	TGCCAGATTC	CATCGCCCGA	6700
6701	ATTTTTCACA	GAATTGGACG	GGGTGGCCCT	ACACAGGGTT	GGGCCCTT	GCAAGCCCTT	GCTGGGGCTT	GAGGTATCAT	TCAAGSTAGGG	ACTCCACGAG	6800
6801	TACCCGGTGG	GGTCGAATT	ACCTTGGCAG	CCCGAACCGG	ACGTAGGGT	GTGTACCTG	ATGCTCACTG	ATCCCTCCCCA	TATAACAGCA	GAGGGGGCCG	6900
6901	GGAGAAGGT	GGCGAGAGGG	TCAACCCCCCTT	CTATGGCCAG	CTCCTCGGGT	ACCCAGCTGT	CGCTCCCATC	TCTCAAGGCA	ACTTGCACCG	CCAACCTGTA	7000
7001	CTCCCTGAC	GCCGAGCTCA	TAGAGGTAA	CCTCTGTGG	AGGAGGAGA	TGGGGGCAA	CATCACCAAG	GTTGAGTCAG	AGAACAAAGT	GGTGTATTCTG	7100
7101	GACTCCTTCG	ATCCGTTG	GGCAAGGGAG	GATGAGGGGG	AGGTCTCGGT	ACTGCTGAGAA	ATTCTGGGGA	GGTCATGGG	ATTCGCCCCG	GGCTTGGCCCG	7200
7201	TCTGGGGCTG	GGCCGACTAC	AACCCCCCTA	TTAGAGGAAAG	GTGAGGGGG	CCCTGACTGT	AATCAACCTT	ATCTACTGCC	TTGGCCGAGC	CACCTCCACG	7300
7301	GTCCCCCTCC	GTGGCTTCCC	CTCGGAAAAAA	CGTAGGGTTG	GTCCTACCCG	GCCGGCCCT	TCTGGCTGCC	CCCCGACTC	CGACGTTGAG	TCCPATTTCT	7500
7401	AGCTCCTCAA	CTTCGGGCAT	TACGGGGCAC	ATAACGACAA	CATCCTCTGA	GGTCAGTAG	TCATGGTGA	CGGTGAGGATG	ACGGAAGATG	TCGTGTGCTG	7600
7501	CATGCCCCC	CCTGGGGGG	GGGGGGGGGG	ATCCGGATCT	CAGCGACGGG	TCATGGTGA	AAGAACAAA	ACTGCCATC	AACGCACTGA	GCAACTCTGT	7700
7601	CTCAATGTC	TATTCCTGG	CAGGGGCACT	GTCAACCCC	TGCGCTGGGG	GAAAGAACAAA	ACTTGTGACA	TTTGTGACA	TGCAAGTAC	TACCAAGCCAT	7800
7701	CACAAATGTC	TGTATTCTGG	CACCTTCAC	AGTGCCTGCG	AAAGGAGAA	GAAAGTCA	TCGTAGAGG	AAGCTTGCG	CCTGACGCC	CCACATTCAG	7900
7801	TGCTCAAGGA	GGTCAAAAGCA	GGGGCTGTC	AAAGTGAAGGC	TAACTTGCTA	CCACATCAA	CTCCGTGTTG	AAAGACCTTC	TGGAAGACAG	TGTAACACCA	8000
7901	GTGTTGGCTAT	GGGGCAAAAG	ACGTCCGTTG	CATGCCAGA	AGGGCGTAG	CGTAAGCAG	CGTGTCTCAT	CGTGTCTCAT	CGTGTCTCAT	GACCTGGGGC	8100
8001	ATAGACACTA	CCATCATGGC	CAAGAACGAG	GTTTCTGTCG	TTICAGCTGA	TTICAGCTGA	CTACGGATTTC	CAATACTCAC	CAGGACACT	CTGGCCGTGA	8200
8101	TGGCCGTGTTG	CGAGAAGATG	GCCCTGTAGC	ACGTGGTTAG	CAAGAACGAC	CCGATGGGGT	TGGGAAGGCT	TGACCGCTG	TACCCGGTGT	TCTCGTATGA	8300

13/38

Fig. 11A-3

8301	CGTACGGGG AGGCAATTAA	CCAATGTTGT GACCTGGAC	CCTAAGCCCC CGTGGGCCATC	AAGTCCCTCA CTGAGAGGCT	TTATGTTGGG	GGCCCTCTTA	8400
8401	CCAAATTCAAG GGGGAAAAC	TGCGGCTACC GCAGGTGCCG	CGCGAGGGGC	CTAGCTGTGG TAACACCCCTC	ACITGGTACA	TCAAGGGCCCG	8500
8501	GGCAGCCCTGT CGAGCCGAG	GGCTTCAGGA CTGACCCATG	CICGTGTGTG	GGAGCGACTT AGTCGTTATC	TGTGAAAGTG	GGAGGAGCG	8600
8601	GAGGCCTGA GAGGCCTCAC	GGAGGCTATG ACCAGGTACT	CGCCCCCCC	CCACAACCGA AATACGACTT	GGAGCTTATA	ACATCATGCT	8700
8701	CTCTCCAACGT GTCACTGCC	GTCACTGCC CACGACGGCG	GGCTACTAC	CTTACCCGTG ACCCTACAA	CCCCCTCGGG AGAGGCCGCT	GGGAGACAGC	8800
8801	AGGACACACT CGAGCTATT	CCTGGCTAGG CAACATAATC	AIGTTGGCC	CCACACTGTG GGCGGAGGATG	ATACTGATGA	CCCATTTCTT TAGCGTCCTC	8900
8901	ATAGGCCAGG ATCAAGCTGA	ACAGGCTCTT ACTGTGAGA	TCTACGGAGC	CTGCTACTCC ATAGAACAC	TGGATCTACC	TCCCATATCATT CAAAGACTCC	9000
9001	ATGGCCCTCA CGCATTTCA	CTCCACAGTT ACTCTCCAGG	TGAAATCAAT	AGGGTGGCCG CATGCCCTAG AAAACCTGGG	GTCCCCGGCCCT	TGCGAGGCTTG	9100
9101	GRGACACGGG GCCCGGAGCG	TCCCGGCTAG GCTTCTGTCC	AGGGAGGCA	GGGCTGCCAT ATGTTGGCAAG	TACCTCTCA	ACTGGGCAAGT AAGAACAAAG	9200
9201	CTCAAACCTCA CTCCAAATAGC	GGCCGCTGGC CGGCTGGACT	TGTCACGGGTG	GTTCACGGCT	GGGAGACAT TTATCACAGC	GTGTCCTATG	9300
9301	CCGGCCCCGG CTGGTTCTGG	TTTGCGCTAC TCCGTCTGC	TGAGGGGTA	GGCATCTACC TCCTCCCCAA	CCGAAGAAGG TTGGGGTAA	CACTCCGGCC	9400
9401	TCTTAAGCCA TTTCCTGTTT	TTTTTTTTTT TTTTTTTTTT	TTTTTCTTT	TCCTTCTCTT	TTTCTTTTTC	CCTTCTTAA	9500
9501	TGTTGGCTCC AICTTACGCC	TAGTACGGC TAGCTGTGAA	AGTCCGTTGA	GCGGCAATGAC	TGCAAGAGT GCTGATACTG	GCCTCTCTGAG	9599
	10   20   30   40   50   60   70   80   90   100						

# Fig. 11B-1

342/1 ATG ACG AAT CCT AAA CCT CAA AGA AAA ACC AAC ACC CGT AAG ACC CGC CGT CCG GTC AAG TTC CCG GGT GGC GGT CAG ATC  
 M S T N P K R Q R K T K R N T N R R P Q D V K F P G G G G Q I  
 432/31 GTR GGT GGA GTT TAC TTG CCG CGC ACG GGG CCT AGA TTG GGT CTG CGC GGG TAC AAG ACT TCC GAG CGG TCG CAA CCT CGA GGT  
 V G V Y L P R R G P R L G V R A T R K T S E R S Q P R G  
 462/41 552/71 612/91 642/101 702/121 792/151 882/181 972/211 1062/241 1152/271 1242/301 1332/331 1422/361 1512/391 1602/421  
 AGA CGT CAG CCT ATC CCC AAG GCA CGT CGG CCC GAG GGC AGG ACC TGG GCT CAG CGC CCC GGG TAC CCT TGG CCC CTC TAT GGC AAT GAG GGT  
 R R Q P I P K A R R P E G R T W A Q P G Y P W P L Y G N E G  
 582/81 672/111 732/131 762/141 852/171 912/191 1002/221 1032/231 1122/261 1212/291 1302/321 1392/341 1482/371 1542/401 1572/411  
 TGC GGG TGG GCG GGA TGG CTC CTG TCT CGT CGC TGG CCT AGC TGG CCC ACA GAC CCC CGG CGT AGG TCG CGC AAT TTG GGT  
 C G W A G W L S P R G S R P S W G P T D P R R S R N L G  
 AAG GTC ATC GAT ACC CTT ACG TGC GGC TTC GCC GAC CTC ATG GGG TAC ATA CCG CTC GTC GGCG CCT CTT GGA GGCG GCT GCC AGG GCC  
 K V I D T L T C G F A D L M G Y I P L V G A P L G G A A R A  
 822/161 942/201 1002/221 1032/231 1122/261 1212/291 1302/321 1392/341 1482/371 1542/401 1572/411 1662/441  
 CTG GCG CAT GGC GTC CGG GTT CTG GAA GAC AAC TAT GCA ACA GGG AAC CTT CCT GGT TGC TCT TGC TCT ATC TTC CTT CTG GCC  
 L A H G V R V L E D G V N Y A T G N L P G C S F S I F L L A  
 882/181 972/211 1062/241 1152/271 1242/301 1332/331 1422/361 1512/391 1602/421  
 CTG TCT TCG CTG ACT GTG CCC GCT TCA GCC TAC CAA GTG CGC AAT TCC TCG GGG CCT TAC CAT GTC ACC AAT GAT TGC CCT AAC TCG  
 L L S C L T V P A S A Y Q V R N S S G L Y H V T N D C P N S  
 AGT ATT GTG TAC GAG GCG GCC ATC CTG CAC ACT CCG GGG TGT GTC CCT TGC GTT CGC GAG GGT AAC GCC TCG AGG TGT TGG GTG  
 S I V Y E A A D A I L H T P G C V P C V R E G N A S R C W V  
 1092/251 1182/281 1272/311 1362/341 1452/371 1542/401 1632/431  
 GCG GTG ACC CCC ACG GTG GCC ACC AGC GAC GGC AAA CTC CCC ACA ACG CAG CTC CCT CGA CGT CAT ATC GAT CTG CTT GTC GGG AGC GCC ACC  
 A V T P T V A T R D G K L P T T Q L R R H I D L V G S A T  
 1182/281 1272/311 1362/341  
 CTC TCG TCG GCC CTC TAC GTG GGG GAC CTG TGC TGG TCT GTC TTT CTG GTT GGT CAA CTG TTT ACC TTC TCT CCC AGG CGC CAC TGG ACG  
 L C S A L Y V G D L C G S V F L V G Q L F S P R R H W T  
 1242/301 ACG CAA GAC TGC AAT TGT TCT ATC TAT CCC GGC CAT ATA AGC GGT CAT CGC ATG GCA TGG GAT ATG ATG AAC TGG TCC CCT ACG GCA  
 T Q D C N C S I Y P G H I T G H R M A W D M M N W S P T A  
 1332/331 1422/361 1512/391 1602/421  
 GCG TTG GTG GTA GCT CAG CTG CTC CGG CTC CGG ATC GTC ATG GAC ATG ATC GCT GGT GCT CAC TGG GGA GTC CTG GCG GGC ATA GCG  
 A L V V A Q L L R I P Q A I M D M I A G A H W G V L A G I A  
 1392/351 1482/381 1542/401 1662/441  
 TAT TTC TCC ATG GTG GGG AAC TGG GCG AAG GTC CTG GTA GTG CTG CTA TTT GCC GGG GTC GAC GCG GAA ACC CAC GTC ACC GGG GGA  
 Y F S N V G N W A K V L V V L L F A G V D A E T H V T G G  
 1452/371 1542/401 1632/431  
 AAT GCC GGC CGC ACC ACG GCT GGG CTT GTT GGT CTC CTT ACA CCA GCA GGG GTC AAC ACC AAC GGC AGT TGG  
 N A G R T F A G L V G L T P G A K Q N I L I N T N G S W  
 1572/411 1662/441  
 CAC ATC AAT AGC ACG GCC TTG AAT TGC AAT GAA AGC CTT AAC ACC GGC CTC TTC TAT CAA CAC AAA TTC AAC TCT TCA  
 H I N S T A L N C N E S L N T G W L A G L F Y Q H K F N S S

15/38

Fig. 11B-2

1692/451	GGC TGT CCT GAG AGG TTG GCC AGC TGC CGA CGC CTT ACC GAT TTT GCC CAG GGC TGG GGT CCT ATC AGT TAT GCC AAC GGA AGC GGC CTC	1722/461	CCT ATC AGT TAT GCC AAC GGA AGC GGC CTC
1782/481	G C P E R L A S C R R Q F D F A Q G W G P I S Y A N G S G L	1812/491	1812/491 1842/501
GAC GAA CGC CCC TAC TGC TGG CAC TAC CCT CCA AGA CCT TGT GGC ATT GTG CCC GCA AAG AGC GTG TGT GGC CCG GTC TAT TGC TTC ACT	D E R P Y C W H Y P P C G I V P A K S V C G P V Y C F T	1902/521	1932/531
CCC AGC CCC GTG GTG GG ACG ACC GAC ACC GAC AGG TCG GCG CCT ACC TAC AGC TGG GGT GCA AAT GAT ACG GAT GTC TTC GTC CTT AAC	P V V G T D R S G A P T Y S W G A N D T D V F V L N	1992/551	2022/561
AAC ACC AGG CCA CCG CTG GGC AAT TGG TTC GGT TGT ACC TGG ATG AAC TCA ACT GGA TTC ACC AAA GTG TGC GGA GCG CCC CCT TGT GTC	I G N T R P L G N W F G C T W M N S T G F T K V C G A P P C V	2082/581	2112/591
ATC GGA GGG GTG GGC AAC ACC TTG CTC TGC CCC ACT GAT TGC TTC CGC AAA CAT CCG GAA GCC ACA TAC TCT CGG TGC GGC TCC GGT	P W I F P R C M V D Y R L Y P C H Y P E A T Y S R C G S G	2172/611	2202/621
CCC TGG ATT ACA CCC AGG TGC ATG GTC GAC TAC CCG TAT AGG CTT TGG CAC TAT CCT CGT ACC ATA TAC ACC ATA TTC AAA GTC AGG	N Y V G G V E H R L E A C N W T R G E R C D L E D R S	2262/641	2292/651
ATG TAC GTG GGA GGG GTC GAG CAC AGG CTG GAA GGC GCG GCC TGC AAC TGG ACG CGG GGC GAA CGC TGT GAT CTG GAA GAC AGG GAC AGG TCC	P H I T P R C M V D Y R L Y P C H Y P E A T Y S R C G S G	2352/671	2382/681
GAG CTC AGC CCG TTG CTG CTG TCC ACC ACA CAG TGG CAG GTC CTT CCG TGT TCT ACC CGC CTC GCA GCC TTG TCC ACC GGC CTC ATC	E L S P L L S T T Q W Q V L P C S F T L P A L S T G L I	2442/701	2472/711
CAC CTC CAC CAG AAC ATT GTG GAC GTG CAG TAC TTG TAC GGG GTA GGG TCA AGC ATC GCG TCC TGG GCC ATT AAG TGG GAG TAC GTC GTT	H L Q N I V D V Q Y L Y G V G S I A S W A I K W E Y V V	2532/731	2562/741
CTC CTG TTC CTT CTG CTT GCA GAC CGC CGC GTC TGC TCC TGT GGG ATG ATG TTA CTC CAA GCG GAG GCG GCT TTG GAG AAC	L L F L L A D A R V C S C L W M M L L I S Q A E A L E N	2592/751	2652/771
CTC GTA ATA CTC AAT GCA GCA TCC CTG GCC GGG AGC CAC GGT CTT GTG TCC TTC CTC GTG TTC TGC TTT GCG TGG TAT CTG AAG GGT	L V I L N A S L A G T H G L V S F L V F C F A W Y L K G	2682/781	2742/801
AGG TGG GTG CCC GGA GCG GTC TAC GCC CTC TAC TGG CCT CTC CTC CTG CTC CTG GCG TTG CCT CAG CGG GCA TAC GCA CGA	R W V P G A V Y A L Y G M W P L L L P Q R A Y A L	2772/811	2832/831
GAC ACG GAG GTG GCC GCG TCG TGT GGC GGC GTT CTT GTC GGG TTA ATG GCG CTG ACT CTG TCG CCA TAT TAC AAG CGC TAT ATC AGC	D T E V A A S C G G V L V G L M A L T L S P Y Y K R Y I S	2862/841	2922/851
TGG TGC ATG TGG TGG CTT CAG TAT TTT CTG ACC AGA GTA GAA GCG CAA CTG CAC GTG TGG GTT CCC CCC CTC AAC GTC CGG GGG CGC	W C M W W L Q Y F L T R V E A Q L H V W P L N V R G G R	2952/871	3012/891
GAT GTC ATC TTA CTC ATG TGT GTA GTA GTC ACC AAA CTC CTC CGC ACC CTG GCC ATC TTC GTC GCA TAT GAC TTT GGA CCC CTT TGG	D A V I L W C V H P T L V F D I T K L A L F G B L W		

# Fig. 11B-3

3042/901	ATT CTT CAA GCC AGT TTG CTT AAA GTC CCC TAC TTC GTG CGC GTT CAA GGC CTC CGG CTC CGG CTC CGG ATC TGC GCG CTA GCG CGG AAG ATA GCC GGA	3072/911	GAT CGA CAA GGT TCC TCT GGG TCA GCA GGC TCT CCT	3102/921
I L Q A S L L K V P Y F V R V Q G L L R I C A L R K I A G	3132/931	GAT CGA CAA GGT TCC TCT GGG TCA GCA GGC TCT CCT	3162/941	3192/951
G H Y V Q M A I I K L G A L T G T Y V N H L T P L R D W A	3222/961	3252/971	3282/981	3302/991
CAC AAC GGC CTG CGA GAT CTG GCC GTG GCT GTC GTC TCC CGA ATG GAG ACC CTC ATC ACG TGG GGG GCA GAT ACC	H N G L R D L A V A P V V F S R M E T K L I T W G A D T	3342/1001	GCC GCG TGC GGT GAC ATC ATC AAC GGC TTG CCC GTC TCT GCC CGT AGG GGC CAG GAG ATG GTC TCC	3372/1011
A A C G D I I N G L P V S A R R G Q E I L L G P A D G M V S	3402/1021	3432/1031	3462/1041	3492/1051
K G W R L L A P I T A Y A Q Q T R G L , L G C I I T S L T G R	3492/1051	3522/1061	3552/1071	GAC AAA AAC CAA GTG GAG GGT GAG GTC CAG ATC GTG TCA ACT GCT ACC CAA ACC TTC CTG GCA ACG TGC ATC AAT GGG GTA TGC CTC W T
D K N Q V E G E V Q I V S T A T Q T F L A T C I N G V C W T	3582/1081	3612/1091	3642/1101	GTC AAC GGG GCC GGA ACG AGG ACC ATC GCA TCA CCC AAG GGT CCT GTC ATC CAG ATG TAT ACC AAT GTG GAC CAA GAC CTT GTG GGC
V Y H G A G T R T I A S P K G P V I Q M Y T N V D Q D L V G	3672/1111	3702/1121	3732/1131	V Y H G A G T R T I A S P K G P V I Q M Y T N V D Q D L V G
W P A P Q G S R S L T P C T C G S S D L Y L V T R H A D V I	3762/1141	3792/1151	3822/1161	TGG CCC GCT CCT CAA GGT TCC CGC TCA TTG ACA CCC TGT ACC TGC GGC TCC TCG GAC CTT TAC CTG GTC ACG AGG CAC GCC GAT GTC ATT
P V R R G D S R G S L L S P R P I S Y L K G S S G G P L L	3852/1171	3882/1181	3912/1191	CCC GTG CGC CGG CGA GGT GAT AGC AGG GGT AGC CTG CTT TCG CCC CGG CCC ATT TCC TAC TTG AAA GGC TCC TCG GGG GGT CCC CTG TTG
C P A G H A V G L F R A A V C T R G V A K A V D F I P V E N	3942/1201	3972/1211	4002/1221	P V R R G D S R G S L L S P R P I S Y L K G S S G G P L L
L G T T M R S P V F T D N S S P P A V P Q S F Q V A H L H A	4032/1231	4062/1241	4092/1251	TGC CCC GCG GGA CAC GCC GTG GGC CTA TTC AGG GCC GCG GTG TGC ACC CGT GGA GTG GCT AAA GCG GTG GAC TTT ATC CCT GTG GAG AAC
P T G S G K S T K V P A A Y A A Q G Y K V L N P S V A A	4122/1261	4152/1271	4182/1281	C P A G H A V G L F R A A V C T R G V A K A V D F I P V E N
T L G F G A Y M S K A H G V D P N I R T G V R T I T G S P	4212/1291	4242/1301	4272/1311	CTA GGG ACA ACC ATG AGA TCC CCG GTG TTC AGC GAC AAC TCC TCT CCA CCA GCA GTG CCC CAG AGC TTC CAG CTG CAT GCT
T D A T S I L G I G T V L D Q A E T A G A R L V L A T A T	4302/1321	4332/1331	4362/1341	CCC ACC GGC AGC GGT AAG AGC ACC AAG GTC CCG GCT GGC TAC GCA GCC CAG GGC TAC AAG GTG TTG GTG CTC AAC CCC TCT GTT GCT GCA

17/38

Fig. 11B-4

# Fig. 11B-5

5742/1801	CTA ACC ACT GGC CAA ACC CTC CTC TTC AAC ATA TTG GGG GCT GCC CAG CTC GGC CCC GGT GGC CCC GCA TCG ATT CTT GCA GGG TAT GGC GGC GGC GTG GCG	5772/1811	G A T A P G A T A F V	5802/1821
L T G Q T L F N I L G	S V G S V G L G K V	A Q L A Q L A Q	P G A P G A P G	
5832/1831	5862/1841	5892/1851		
G A G L A G A A I G	S M A S V G E V	D V D I L A G	V A G V A	
5922/1861	5952/1871	5982/1881		
G A L V A F K I M S	E V P S T E D I V	N I V N I P A I L	S P G	
6012/1891	6042/1901	6072/1911		
GCC CTT GTA GTC GGT GTG GTC TGC GCA ATA CTG CGC CGG CAC GTT GGC CCG GAG GGG GCA GTG CAA TGG ATG AAC CGG CTA ATA	A L V V G V V C A A	R R H V G P G	E G A V Q W M N R L I	
6102/1921	6132/1931	6162/1941		
GCC TTC GCC TCC CGG GGG AAC CAT GTT TCC CCC ACG CAC TAC GTG CCG GAG AGC GAT GCA GCC GCC GTC ACT GCC ATA CTC AGC AGC	A F A S R G N H V S P T H Y V P E S D A A R V T A I L S S			
6192/1951	6222/1961	6252/1971		
CTC ACT GTA ACC CAG CTC CTG AGG CGA CTG CAT CAG TGG ATA AGC TCG GAG TGT ACC ACT CCA TGC TCC GGT TCC TGG CTA AGG GAC ATC	L T V T Q L R R L H Q W I S S E C T T P C S G S W L R D I			
6282/1981	6312/1991	6342/2001		
TGG GAC TGG ATA TGC GAG GTG CTG AGC GAC TTT AAG ACC TGG CTG AAA GCC AAG CTC ATG CCA CAA CTG CCT GGG ATT CCC TTT GTG TCC	W D W I C E V L S D F K T W L K A K L M P Q L P G I P F V S			
6372/2011	6402/2021	6432/2031		
TGC CAG CGC CGG TAT AGG GGG GTC TGG CGA GGA GAC GGC ATT ATG CAC ACT CGC TGC CAC TGT GGA GCT GAG ATC ACT GGA CAT GTC AAA	C Q R G Y R G V W R G D G I M H T R C H C A E I T G H V K			
6462/2041	6492/2051	6522/2061		
AAC GGG ACG ATG AGG ATC GTC GGT CCT AGG ACC TGC AGG AAC ATG TGG AGT GGG ACG TTC CCC ATT AAC GCC TAC ACC ACG GGC CCC TGT	N G T M R I V G P R T C R N M W S G T F C P I N A Y T T G P C			
6552/2071	6582/2081	6612/2091		
ACT CCC CTT CCT CGG CCG AAC DAT AAG TTC GCG CTG TGG AGG GTG TCT GCA GAG GAA TAC GTG GAG ATA AGG CGG GTG GGG GAC TTC CAC	T P L P A P N Y K F A L W R V S A E E Y V E I R R V G D F H			
6642/2101	6672/2111	6702/2121		
TAC GTA TCG GGT ATG ACT ACT GAC AAT CTT AAA TGC CCG TGC CAG ATC CCA TTG CCC GAA TTG ACA GAA TTG GAC GGG GTG CGC CTA	Y V S G M T T D N L K C P C Q I P S P E F F T E L D G V R L			
6732/2131	6762/2141	6792/2151		
CAC AGG TTT GCG CCC CCT TGC AAG CCC TTG CTG CGG GAG GAG GTA TCA TTC AGA GGA CTC CAC GAG TAC CCC GTG GGG TCG CAA TTA	H R F A P P C K P L R E V S F R V G L H E Y P V G S Q L			
6822/2161	6852/2171	6882/2181		
CCT TGC GAG CCC GAA CGG GAC GTA GCC GTG TTG ACG TCC ATG CTC ACT GAT CCC TCC CAT ATA ACA GCA GAG GCG GCC GGG AGA AGG TTG	P C E P E P D V A V L T S M L T D P S H I T A E A A G R R L			
6912/2191	6942/2201	6972/2211		
GCG AGA GGG TCA CCC CCT TCT ATG GCC AGC TCC TCG GCT AGC CAG CTG TCC GCT CCA TCT CTC AAG GCA ACT TGC ACC GCC AAC CAT GAC	A R G S P S M A S S Q L S A P S L K A T C T A N H D			
7002/2221	7032/2231	7062/2241		
TCC CCT GAC GCC GAG CTC GCT ACI ATA GAG GCT ACI CTC CTG TGG AGG CAG GAG ATG GGC GGC AAC ACI ACC AGG GTT GAG TCA GAG AAC AAA GTG	S P D A E L I E A N L L W R Q E M G N I T R V E S E N K V			

19/38

**Fig. 11B-6**

7092/2251 GTG ATT CTG GAC TCC TTC GAT CCG CTT GTG GCA GAG GAT GAG CGG GAG GTC TCC GTA CCA GAA ATT CTG CGG AAG TCT CGG AGA V I L D S F D P L V A E D E R E D E V S V P A E I L R K S R R	7122/2261 7212/2291 TTC GCC CGG CCC CTG CCC GTC TGG GCG CGG CCG GAC TAC AAC CCC CCG CTA GTA GAG ACG TGG AAA AAG CCT GAC TAC GAA CCA CCT GTG F A R A L P V W A R P D Y N P P L V E T W K K P D Y E P P V	7152/2271 7242/2301 7332/2331 GTC CAT GCC TGC CCG CTA CCA CCT CCA CGG TCC CCT CCT GTG CCT CGG AAA AAG CGT ACG GTG GTC CTC ACC GAA TCA ACC CTA V H G C P L P P R S P V E T R K K R T V V L T E S T L
7182/2281 TTC GCC CGG CCC CTG CCC GTC TGG GCG CGG CCG GAC TAC AAC CCC CCG CTA GTA GAG ACG TGG AAA AAG CCT GAC TAC GAA CCA CCT GTG F A R A L P V W A R P D Y N P P L V E T W K K P D Y E P P V	7302/2321 7362/2341 TCT ACT GCC TTG GCC GAG CTT GCC ACC AAA AGT TTT GGC AGC TCC TCA ACT TCC GGC ATT ACG GGC GAC ATT ACG ACA ACA TCC TCT GAG S T A L A E L A T K S F G S S T S G I T G D N T T S S E	7332/2331 7392/2351 7422/2361 GTC CAT GCC TGC CCG CTA CCA CCT CCA CGG TCC CCT CCT GTG CCT CGG AAA AAG CGT ACG GTG GTC CTC ACC GAA TCA ACC CTA V H G C P L P P R S P V E T R K K R T V V L T E S T L
7272/2311 GTC CAT GCC TGC CCG CTA CCA CCT CCA CGG TCC CCT CCT GTG CCT CGG CCT CGG AAA AAG CGT ACG GTG GTC CTC ACC GAA TCA ACC CTA V H G C P L P P R S P V E T R K K R T V V L T E S T L	7452/2371 CCC GCC CCT TCT GGC TGC CCC GAC TCC GAC GTT GAG TCC TAT TCT TCC ATG CCC CCC CTG GAG GGG GAG CCT GCG GAT CTC P A P S G C P D S D V E S Y S M P P L E P G E P G D P D L	7512/2391 7572/2411 AGC GAC GGG TCA TGG TCG ACG ETC AGT AGT GGG GCC GAC AGC GAA GAT GTC GTG TGC TCA ATG TCT TAT TCC TGG ACA GGC GCA CTC S D G S W S T V S S G A D T E D V V C C S M S Y S W T G A L
7632/2431 GTC ACC CCG TGC GCT GCG GAA CAA AAA CTG CCC ATC AAC GCA CTG AGC AAC TCG TTG CTA CGC CAT CAC AAT CTG GTG TAT TCC ACC V T P C A A E E Q K L P I N A L S N S L L R H H N L V Y S T	7722/2461 ACT TCA CGC AGT GCT TGC CAA AGG CAG AAA GTC ACA TTT GAC AGA CTG CAA GTT CTG GAC AGC CAT TAC CAG GAC TGT CTC AAG GAG T S R S A C Q R Q K V T F D R L Q V L D S H Y Q D V L K E	7782/2481 7812/2491 GTC AAA GCA GCG GCG TCA AAA GTG AAG GCT AAC TTG CTA TCC GTA GAG GAA GCT TGC AGC CGT AGC CCC CCA CAT TCA GCC AAA TCC AAG V X A A S K V A N L L S V E E A C S L T P P H S A K S K
7902/2521 TTT GGC TAT TGG GCA AAA GAC GTC CGT TGC CAT GCC AGA AAG GCC GTC ATA AAC GAC ATC ATC TCC GTG TGG AAA GAC CTT CTG GAA GAC AGT F G Y G A K D V R C H A R K A V A H I N S V W K D L L E D S	7932/2531 7842/2501 GTC AAA GCA GCG GCG TCA AAA GTG AAG GCT AAC TTG CTA TCC GTA GAG GAA GCT TGC AGC CGT AGC CCC CCA CAT TCA GCC AAA TCC AAG V X A A S K V A N L L S V E E A C S L T P P H S A K S K	7962/2541 7872/2511 GTC AAA GCA GCG GCG TCA AAA GTG AAG GCT AAC TTG CTA TCC GTA GAG GAA GCT TGC AGC CGT AGC CCC CCA CAT TCA GCC AAA TCC AAG V X A A S K V A N L L S V E E A C S L T P P H S A K S K
7992/2551 GTA ACA CCA ATA GAC ACT ACC ATC ATG GCC AAG AAC GAG GTT TTC TGC GTT CAG CCT GAG AAG GGG GGT CGT AAG CCA GCT CGT CRC ATC V T P I D T T I M A K N E V F C V Q P E K G G R K P A R L I	8022/2561 8082/2581 GTC TTG CCC GAC CTG CGG GTG CGC GAG ATG GCC CTG TAC GAC GTG GTT AGC AAG CTC CCC CTG GCC GTG ATG GGA AGC TCC V F P D L G V R C E K M A L Y D V V S K L P L A V M G S S	8052/2571 8112/2591 GTC TTG CCC GAC CTG CGG GTG CGC GAG ATG GCC CTG TAC GAC GTG GTT AGC AAG CTC CCC CTG GCC GTG ATG GGA AGC TCC V F P D L G V R C E K M A L Y D V V S K L P L A V M G S S
8172/2611 TAC GGA TTC CAA TAC TCA CCA CGG CAG CGG GTT GAA TTC CTC GTG CAA GCG TGG AAG TCC AAG AAG ACC CCG ATG GGG TTC TCG TAT GAT Y G F Q Y S P G Q R V E F I V Q A W K S K K T P M G F S Y D	8202/2621 8262/2641 ACC CGC TGT TTT GAC TCC ACA GTC ACT GAG AGC GAC ATC CGT ACG GAG GCA ATT TAC CAA TGT TGT GAC CTG GAC CCC CAA GCC CGC T R C F D S T V E S D I R T E A I Y Q C C D L P Q A R	8232/2631 8142/2601 GTC TTG CCC GAC CTG CGG GTG CGC GAG ATG GCC CTG TAC GAC GTG GTT AGC AAG CTC CCC CTG GCC GTG ATG GGA AGC TCC V F P D L G V R C E K M A L Y D V V S K L P L A V M G S S
8352/2671 GTC GCC ATC AAG TCC CTC ACT GAG AGG CTT TAT GTT GGG GGC CCT CTT ACC AAT TCA AGG GGG GAA AAC TGC GGC TAC CGC AGG TGC CGC V A I K S L T E R L Y V G G P L T N S R G E N C G Y R R C R	8292/2651 8332/2661 GTC TTG CCC GAC CTG CGG GTG CGC GAG ATG GCC CTG TAC GAC GTG GTT AGC AAG CTC CCC CTG GCC GTG ATG GGA AGC TCC V F P D L G V R C E K M A L Y D V V S K L P L A V M G S S	8412/2691 GTC TTG CCC GAC CTG CGG GTG CGC GAG ATG GCC CTG TAC GAC GTG GTT AGC AAG CTC CCC CTG GCC GTG ATG GGA AGC TCC V F P D L G V R C E K M A L Y D V V S K L P L A V M G S S

# Fig. 11B-7

8442/2701 GCG AGC GGC GTA CTG ACA ACT AGC TGT GGT AAC ACC CTC ACT TGC TAC ATC AAG GCC CGG GCA GCC TGT CGA GCA GGG CTC CAG GAC A S G V L T S C G N T L T C Y I K A R A C R A A G L Q D	8472/2711 8532/2731 TGC ACC ATG CTC GTC GTC TGT GAC GAC TTA GTC GTT ATC TGT GAA AGT GCG GGG GTC CAG GAG GAC GCG AGC CTG AGA GCC TTC ACG C T M L V C G D D L V V I C E S A G V O E D A A S L R A F T	8502/2721 8562/2741 8622/2761 GAG GCT ATG ACC AGG TAC TCC GCC CCC GGG GAC CCC CCA CAA CCA GAA TAC GAC TTG GAG CTT ATA ACA TCA TGC TCC TCC AAC GTG E A M T R Y S A P P G D P Q P E Y D L E L I T S C S N V
8712/2791 TCA GTC GCC CAC GAC GGC GCT GGA AAG AGG GTC TAC CCT ACC CGT GAC CCT ACA ACC CCC CTC GCG AGA GCC GCG TGG GAG ACA GCA S V A H D G A G K R V Y Y L T R D P T T P L A R A W E T A	8802/2821 AGA CAC ACT CCA GTC AAT TCC TGG CTA GGC AAC ATA ATC ATG TTT GCC CCC ACA CTG TTG GCG AGG ATG ATA CTG ATG ACC CAT TTC TTT R H T P V N S W L G N I I M F A P T L W A R M I L M T H F F	8742/2801 8772/2811 8832/2831 8862/2841 AGC GTC CTC ATA GCC AGG GAT CAG CTT GAA CAG GCT CTT AAC TGT GAG ATC TAC GGA GCC TGC TAC TCC ATA GAA CCA CTG GAT CTA CCT S V L I A R D Q L E Q A L N C E I Y G A C Y S I E P L D L P
8892/2851 AGC GTC CTC ATA GCC AGG GAT CAG CTT GAA CAG GCT CTT AAC TGT GAG ATC TAC GGA GCC TGC TAC TCC ATA GAA CCA CTG GAT CTA CCT S V L I A R D Q L E Q A L N C E I Y G A C Y S I E P L D L P	8922/2861 8982/2881 CCA ATC ATT CAA AGA CTC CAT GGC CTC AGC GCA TTT TCA CTC CAC AGT TAC TCT CCA GGT GAA ATC AAT AGG GTG GCC GCA TGC CTC AGA P I I Q R L H G L S A F S L H S Y S P G E I N R V A A C L R	9012/2891 9042/2901 9102/2921 AAA CTT GGG GTC CCG CCC TTG CGA GCT TTG AGA CAC CGG GCC CGG AGC GTC CGC GCT AGG CTT CTG TCC AGA GGA GGC AGG GCT GCC ATA K L G V P P L R A W R H R A R S V R A R L S R G G R A A I
9162/2941 TGT GGC AAG TAC CTC TTC AAC TGG GCA GTA AGA ACA AAG CTC AAA CTC ACT CCA ATA GCG GCT GGC CGG CTG GAC TTG TCC GGT TG C G K Y L F N W A V R T K L T P I A A G R L D L S G W	9192/2951 9252/2971 TTC ACG GCT GGG TAC AGC GGG GGA GAC ATT TAT CAC AGC GTG TCT CAT GCC CGG CCC CGC TGG TTC TGG TTT TGC CTA CTC CTG CTC GCT F T A G Y S G G D I Y H S V S H A R P R W F W C L L L A	9282/2981 9342/3001 GCA GGG GTA GGC ATC TAC CTC CCC AAC CGA TGA A G V G I Y L L P N R *
		9372/3011 9402/3021

21/38

**Fig. 12A-1**

1	10	20	30	40	50	60	70	80	90	100
101	GGCAAGCCCC	TGATGGGGC	GACACTCCAC	TCCCTCTGTGA	GGAACTACTG	TCTTCACGCC	GAAGGGCTCT	AAGCCATGGCT	TTRAGTGTAG	100
101	TGTCTGCAG	CCTCAGGAC	CCCCCTCTCCC	GGGAGAGCCA	TAGTGGTCTG	CGGAAACGGGT	GAGTTGCCAG	GAGACGGGG	TCCTTCTCTG	200
201	GATAAACCG	CTCAATGCCCT	GGAGATTGGG	GGCTGCCCTCC	GCAAGACTGC	GTGTTGGGTCA	GCAGAAAGGCC	TTGGGGTACT	GCCTGATAGG	300
301	GTGCTTGCGA	GTGCCCCGGG	AGGTCTCGTA	GAACGTGAC	CATGGAGGCC	GTAGATCCTA	GAATGAGTC	CCAGGAAGTC	AGCCATAAAC	400
401	TGCTTGAC	AATTGCTATT	GTAAAAAAGTG	TTCGCAAGT	GTGCTTCAAT	GTTCATAAC	AAAAGCCCTA	GGCATCTCTCCT	ATGGAGGAA	500
501	CAGCGACAA	GACCTCCTCA	AGGCACTCAG	ACTCATCAA	TTTCTCTATC	AAAGCAACCC	ACCTCCCAAT	CCCGAGGGG2	CCGCACAGGC	600
601	AATTGACCT	TCTTAAGCTT	GGGGAGAGC	TCGAGTCCAA	CCCTGGGGCC	GGATCTGTAA	ACATGATTGA	AACAGATGGA	TTGACCGAG	700
701	CGCTGGGTG	GAGGGCTAT	TGGGCTATGA	CTGGGACAA	CAGACAATCG	GCTGCTCTGA	TGCCGCCGTG	TTCCGGCTGT	AGGGCCGGTT	800
801	CTTTTGTC	AGACCGACCT	GTCCGGTGC	CTGAAATGAA	TGCAAGGAGCA	GGCAGGGGG	CTATCCTG	TGGCACCGAC	GGGGGTTCT	900
901	TGCTCGAGT	TGTCACTGAA	GGGGAGAGG	ACTGGGTGCT	ATGGGGCAA	GTGCCCCGGG	AGGATCTCTCCT	GTCAATCTCAC	CTTGCTCTG	1000
1001	ATCCATCATG	GCTGATGCCA	TGCGGGGGCT	GCATACGCTT	GATCCGGCTA	CCTGCCCAATT	CGACCAACCAA	GGAAACACATC	GCATCGAGGC	1100
1101	CGGATGAA	CGGGCTCTGT	CGATCAGGAT	GATCTGGAGC	AAGGAGCATCA	GGGGCTCGGG	CCAGGGGAAC	TGTTGCGCCAG	GCTCAAGGGC	1200
1201	ACGGCAGGA	TCTCGTCGTG	ACCCATGGGG	ATGCCCTGCTT	GCCGAATATC	ATGGGCGCTT	ATGCCCCGTT	TTCTGGATTC	ATCAGACTG	1300
1301	TGCGGAGC	CGCTATCAGG	ACATAGCTGT	GGCTGATGCT	GGCTGATGCT	GGCTGATGCT	GGGGCAATGG	GCTGACGGGCT	CCCTCTGCT	1400
1401	GGCGCTCCG	ATTCGAGCG	TATCGCTCTC	TATCGCTCTC	TATGAGGAGT	CTTCTGAGGT	TAAACAGACC	GGAAACGGGTT	GGATCAATTG	1500
1501	CGCCCTCTC	CCTCCCCCCC	CCCTAACGTT	ACTGGCCGA	GCCGCTTGGAA	ATTAAGGGCCGG	TCTGCGTTGTT	TCTATATGTT	ATATGCCGT	1600
1601	CTTTTGGAA	TGTGAGGGCC	CGGAAAACCTG	GCCCTGTCTT	CTTGACGGAC	ATTCCTTAAGG	GTCTTTCCCCC	TCTCGCCAAA	GGATATGCAA	1700
1701	TGTCGTGAG	GAAGCAGTTC	CTCTGGAAAGC	TCTCTGAAAGA	CAAACAACGT	CTGTAGGAC	CCTTTGCAAGG	CAAGTGGAGG	CGACAGGTGC	1800
1801	CTCTGGGCC	AAAAGCCACG	TGTATAAGAT	ACACCTGCAA	AGGGGGCACA	ACCCCCAGTGC	CACGTGTGAA	GTGCGATAGT	TGCGAAAGA	1900
1901	TCTCCTCAAG	CGTATTCAC	AGGGGGCTGA	AGGATGCCA	GAAGGTACCC	CATTGTAAG	GATCTGATCT	GGGGGCTCTGG	TGCAATGGC	2000
2001	TTAGTCGAGG	TAAAGAACG	TCTAGGGCCC	CCGAACACAG	GGGACGTGGT	TTTCTTGTGA	AAAACACGAT	CCCTCATAC	GGGTACGCC	2100
2101	CAGCAGACCA	GAGGCCCTCCT	AGGGCTCTATA	ATCACCAAGCC	TGACTGGCCG	GGCAAGTGTG	GGGGCTTGTG	GATCGTTGCA	ACTGCTACCC	2200
2201	AAACCTTCT	GGCAAGTGC	ATCAATGGGG	TATGCTGGAC	TGTCTTACAC	GGGGCCGGAA	CCGGCTCTATT	GGGATACCCC	AAGGGTCTG	2300
2301	GTATAACAT	GTGGACCAAG	ACCTTGTGGG	CTGGCCCGCT	CCTCAAGGTT	GACACCCCT	GGCTGGCTGT	ACCTGGGGCT	CTACCTGTTG	2400
2401	ACGGAGGACG	CCGATGTCTAT	TCCCGTGTGCC	CGGGGAAGGTG	ATAGCGAGGG	TAGCCTGTCTT	TCGGCCGGCC	CCATTTCCTA	CTTGGGGGG	2500
2501	GTCCGGCTGT	GTGCCCCGGG	GIACACGCCG	TGGGGCTATT	CAGGGCCGCG	GTGGATGCCCC	GTGGATGTTG	TAAGGGCTGT	GACTTTATCC	2600
2601	GTGAGGAGCA	ACCTAGAGAT	CCCCGGGGT	CACGGACAA	TCCCTCTCCAC	CGAGCAGTGC	CGAGCAGTGC	CCGGTGGGGCC	ACCTGGATGC	2700
2701	AGGGTGAAGT	GCACCAAGT	CCCCGGTGC	TACGGACAA	AGGGCTACAA	GGTGTGGT	CTCAACCCCT	CTGGTGGCTC	TTTGGGGCTT	2800
2801	ACATGTCAA	GGCCCATGGG	GTGATCTCTA	ATATGAGAC	CGGGGTGAGA	ACAAATTACCA	CTGGGAGGCC	CATCAGTAC	GCAGGTTCCT	2900
2901	TGCCGACGGC	GGGTGCTCAG	GGGGTGGCTTA	TGACATATAA	ATTGTGTAAGC	AGTGGCAACTC	CACGGATGCC	ACATCCATCT	CACTGTCCTT	3000
3001	GACCAAGCAG	AGACTGCGGG	GGCGAGACTG	GTTGGTGTCTG	CCACTGTCTAC	CCCTCCGGGC	TCCGTCACTG	TGTCATGCC	TAACATGAG	3100
3101	TGTCCACAC	CGGAGAGATC	CCCTTTTACG	GCAAGGGCTAT	CCCCCTCGAG	GTGATCAAGG	GGGGGAGACA	TCTCATCTTC	TGCCACTCAA	3200
3201	CGACGAGCTC	GGCGGAAGC	TGGTGCAT	GGGCATCAA	GGCGTGGGCC	ACTACCGGG	TCTTGTACGT	CGACCCAGGG	GGTATGAGCT	3300
3301	GTGCTGCGA	CGGATGCTCT	CATGACTGGC	TTTACGGGG	ACTTCGACTC	TGTGATAGAC	TGCCAACACGT	TGTCATCTCA	GCATCTATAG	3400
3401	ACCTACTT	TACCATGAG	ACAAACACGC	TCCCCCAGGA	TGGCTGTCTC	AGGACTAAC	GGCTGGCAGG	GGTGTGGCTT	CACGCCCGCC	3500
3501	ATTGGTGGCA	CGGGGGAGC	GGCCCTCCGG	CATGTTGGAC	TGGTCCGTCC	TCTGTGAGTG	CTATGACGGG	GGCTGGCTT	GGTATGAGCT	3600
3601	GAGACTACAG	TAGGCTACAG	AGCGTACATG	AACACCCGG	GGCTTCCCGG	CATCTGAAAT	TTTGGGAGGG	CGTCTTACG	GGCCCTCACTC	3700
3701	ATATAGATGC	CCACTTTTTA	TCCCAAGACAA	AGCAGAGTGG	GGAGAAACTTT	CCMTACCTGG	TAGCCATACCA	AGCCACCGGT	CTCAAGCCCC	3800
3801	TCCCCCATCG	TGGGACCCAGA	TGTGGAAGTG	TTTGTATCCG	CITTAACCCCA	CCCTCCCATGG	GCACACACCC	CTGCTATACA	GACTGGGGC	3900
3901	GAAGTCACCC	TGACGCACCC	AATCACCAAA	TACATCATGA	CATGCATGTG	GGCGGACTCTG	GAGGTGCTG	GGGGCGTCTT	GGGGCGTCTC	4000
4001	TGGCTGCTCT	GGCGCGTCT	TCTTGTCCGG	GAAGCCGGCA	ATTATACTG	ACAGGGAGGT	ACAGGGAGGT	TGTTTCAAGAT	TGTTTCAAGAT	4100

# Fig. 12A-2

22/38

4101	TCTCTACCAAG GACTTCGATG AGATGAAAGA GTGCTCTCAG CACTTACCGT	ACATCGAGCA AGGGATGGATG CTCGGTGAGC AGTTCAAGCA GAAGGCCCTC 4200
4201	GGCCCTCTGGC AGAACCGCGTC CGGCATATGCA GAGGTATTCA CCCTCTGTGT	CCAGACCAAC TGGCAGAAC TGAGGTCTT TTGGGGGAAG CACATGTGGA 4300
4301	ATTCATCAG TGGGATACCA TACTGGGG GCCTGTCAAC	AACCCGGCCA TGCTTCATT GATGGCTTT ACAGCTGCC TCACCAAGCCC 4400
4401	ACTAACCACT GGCCAAACCC TCCTCTCAA CATATTGGGG GGTGGTGG	CTGCCCAAGCT CGGCCCTCC GGTGGCGTA CTGGCTT GGGTGTGGC 4500
4501	CTAGCTGGCG CGGCCATGG CAGCTGGGA CTGGGAAAGA TCTCTGTGGA	CATTCTGCA GGGTAGTGGC GGGAGGTCTT GTAGCATTC 4600
4601	AGATCATGAG CGGTAGCTTC CGGCCAACCG AGGACCTGGT CAATCTGCTG	CCGGCCATCC TCTCGCTGG AGGCCATTGTA GTGCGGTGTCG TCTGGGAGC 4700
4701	ATACTGGC CGGCACGGT GCCCCGGGA GGGGGCAGTG CAATGGATGA	ACCGGCTATT AGCCTTGCC TCCCGGGGA ACCATGTTTC CCCCACGCC 4800
4801	TACGTGCGGG AGAGGGATGC AGCCGCCGC GTCACTGCA	CCTCACTGTA ACCCAGCTCC TGAGGGACT GCATCAGTGG ATAAGCTGG 4900
4901	AGTGTACCCAC TCCATGCTCC GGTTCCTGGC TAAGGGACAT	ATATGCGAGG TGCTGAGGA CTTTAAGACC TGGCTGAAAAG CCAAGCTCAT 5000
5001	GCCACAACCTG CCTGGGATTCC CTTTGTGTC CTGGCAGGC	GGGTATAGGC AGGAGAGGG ATTATGCACA CTCGCTGCCA CTGGGAGGT 5100
5101	GAGATCACTG GACATGCAAA AACAGGGAGC ATGAGGATG TCGGTCTAG	GACCTGAGG AACATGTGGA GTGGGAGCTT CCCCATTAC GCCTACACCA 5200
5201	CGGGCCCTTG TACTCCCTT CCTGGCCCGA ACTATAAGT CGCGCTGTGG	CAGAGGATA CTTGAGATA AGGGGGGTGG GGGACTTCCA 5300
5301	CTACGTATCG GTATGACTA CTGCAATCT TAATGCCCCG TGCCAGATCC	CATGCCCGA ATTTCACAA GAATTGGACG GGGTGTGCCCT ACACAGGTTT 5400
5401	GCGGCCCTT GCAAGCCCTT GCTGGGGAG GAGGTATCAT	ACTCCACGAG TACCCAGAG TACCCGGTGG GGTGCAATT ACCTTGCAGG CCCGAAACGGG 5500
5501	ACGTAGCCCT GTTGGCTGCC ATGCTCACTG ATCCCTCCCA TATAACAGCA	GGGGGGCCG GGAGAAGGTT GGCGAGAGGG TCACCCCCCTT CTATGGCCAG 5600
5601	CTTCCTGGGT AGCCAGGTGT CGGCCTCATC TCTCAAGGAA ACTTGOACCG	CCAACCATGA CTCCCTGAC GCGAGCTCA TAGAGGCTAA CCTCCCTGTG 5700
5701	AGGCAAGGAGA TGGGGGGCAA CATCACCGG GTTGGAGTCAG AGAACAAAGT	GGTGATTCTG GACTCCTCG ATCCCTGTG GCGGACTAC GACCCCCCGC TAGTAGAGAC 5800
5801	AGGTCTCCCGT ACCTGTGAGA ATTCTGGCA AGTCTCGAG ATTGCCGG	GCCTCCACG TCTGGCCCG TCTGGCCCG GCGGACTAC GACCCCCCGC TAGTAGAGAC 5900
5901	GTGAAAAAG CCTGATCAG AACCACCTGT GTGCCCTGGC TGCCGCTAC	GCCTCCACG TCTGGCCCG GCGGACTAC GACCCCCCGC TAGTAGAGAC 6000
6001	GTCCCTACCG AATCAACCTT ATCTACTGCG TTGGCCGAGC TTGCCACAA	AAGTTTGGC CCATCCTCAA CTTCGGGCAT AATACGCAAA GATAGGGGAGA 6100
6101	CATCCCTCTGA GCCCGCCCCCT TCTGGCTGCC CCCCGACTC CGACGTGTAG	TCTTATTCTT CCATGCCCTT CCGTGGAGGGG GAGCCCTGGGG ATCCGGATCT 6200
6201	CAAGGACGGG TCATGTGCGA CGGTCAGTAG TGGGGCGAC	CTCAATGCT TATTCTGGA CAGGGGCACT CGTCACCCCG 6300
6301	TGCGCTGCGG AAGAACAAAA ACTGCCATC AACGCACTGA GCAACTCGTT	GCTACGCCAT CACAATCTGG TGTATTCAC CACTTCACGC AGTGTGTGCC 6400
6401	AAAGGCAAA GAAAGTCACA TTGAGAGAC TGCAAGTCT GGACAGCAT	TACCAAGGA GGTCAAGGA GGGGGAGCA AGTGAAGGC 6500
6501	TAACTTGCTA TCCGTGAGG AAGGTGTGAG CTCGAGGCC COACATCAG	CCAAATCCA GTTGGCTAT GGGGAAAGG ACGTCCGTIG CCATGCCAGA 6600
6601	AGGGCGTAG CCCACATCAA CTCCGTGTCG AAAGACCTTC TGGAAAGACAG	TGTAACACCA ATAGACACTA CCATCATGGC CAAGAACAGG GTTTCCTGCG 6700
6701	TTCAGGCTGA GAGGGGGGT CGTAGGCCAG CTGCTCTCAT CGTGTCCCC	GACCTGGGG TGCGCTGTG CGAGAAGATG GCCCCTGTGAG ACCTGGTGTAG 6800
6801	CAAGCTCCCC CTGGCGCTGA TGGGAAGCTC CAATCTCAC	CAGGACGGC GGTGAATTG CTCGGCAAG CGTGGAAAGTC CAAGAACGCC 6900
6901	CGATGGGGT TCTCGTATGA TACCCGCTGT CAGTCATGA	GAGCAGATC CGTACGGAGG AGGCATTATA CCAATGTTT GACCTGGGCC 7000
7001	CCCAAGCCCC CGTGGCCATC AAGTCCCCTCA CTGAGGAGCT TTATGTGGG	GGCCCTCTTA CCAATTCAAG GGGGAAAGAC TGGGGCTAC GCAGGGTGC 7100
7101	CGCGAGCGGC GTACTGTCAA CTAGCTGTGG TAACACCCCT ACTGGTACA	TAAGGCCCG GGCAGCTGT CGAGCTTGA CGGAGCTTAC GAGGGCTATG 7200
7201	CTCGTGTGTG GCGAGCACTT AGTCGTTAC TGTGAAGTG CGGGGCTCA	GGAGGCGC GAGGAGCTAC CCTCCAACTG GTGAGTCGCC CAGACGGCTAG 7300
7301	CGGGCCCCC CGGGACCCC CCACCAACCA ACCCTACAC	ATAGGCTTCAAGT CAGACACTT CCAATTCTGA CAGACATTC
7401	GGTCTACTAC CTTACCGTG CCACACTGT CGGGAGGATG ATACTGTATA	ATAGGCTCTCA TAGGCTCTGA CAGACATTC
7501	ATGTTGCC CCAACTGTG CGGGAGGATG ATACTGTATA	CCCATTTCTT TGGCTCTGA CAGACATTC
7601	TCTACGGAGC CTGGCTACTCC ATAGAACCC TGGATCTAC	CAAAATCTT CAGACATTC
7701	TGAAATCAAAGGGGGCCAT ATGGTGGCCAT ATACGACTT	ATGGCCTCAG CGCAATTTCAG CTCACAGTT ACCTTCACAGG 7700
7801	AGAGGAGGCA GGGCTGCCAT ATGGTGGCAAG TACGGCAGT	TGCGAGCTTG GAGACACGG GCCCCTGGG TCCGGAGCT 7800
7901	TGTCCGGTTG GTTCAGGGCT GGGTAGAGCAAT TTATCACAGC	GTGCTCATG CCGGGCCCG CTGGCTCGG TTTGGCTAC TCCIGCTCGC 8000
8001	TGCAAGGGTA GGCAATCAAC TCCATCCCCAA CCAGTAGAGG TGGGGTAA	CACTCCGGCC TCTTAAGCCA TTTCCTGTGTT TTTTTTTTTT 8100
8101	TTTTTCTTTT TTTTTTCTT TCCTTCTCCTT CTTTTTTTCTC	CTCTCTGCTCC TGGGGCTTAA TGTGGCTCC ATCTAGGCC 8200
8201	AGGTCCCGTGA GCCGCATGAC TGTGAGAGT GCTGATACIG	AGATCATGTG GGTGGGATG GCATCTCCAC CTCCCTCGGG 8300

23/38

**Fig. 12A-3**

8301	GCATCCGGAAG GAGGACGCAC GTCCCACTCGG ATGGCCTAAGG GACTCTAGAC	TGGAATTCTGT CGACGAGCTC CCTATAGTGA GTCGTATAG AGGCCGACTT 8400
8401	GGCCAATTC GAAATCATGG TCAATAGCTGT TTCTCTGGTG AAATTTGTTAT	CGCGTCACAA TTCCACACAA CATACGAGCC GAAAGCTAA AGTGTAAAGC 8500
8501	CTGGGGTGGCC TAATGAGTGA GCTRACTACAC ATTAAATGGG TTGGCTCAC	TGCCCGCTTT CCAGCTGGGA AACCTGTGCT GCGAGCTGCA TTAATGAATC 8600
8601	GGCCAACGGG CGGGAGAGG CGGTGGCTGCT ATTGGGGCTT CTTCGGCTTC	CTCGCTCACT GACTGCTGCG GCTCGGTGCT CGAGGGTAT 8700
8701	CAGCTCACTC AAAGGGGGTA ATACGGTTAT CCACAGATAAC AGGGATAAAC	GCAGGAAGA ACATGTGAGC AAAAGGCCAG CAAAAGGCCA GGAAACCGTAA 8800
8801	AAAGGGCCGCG TTGCTGGCGT TTTTCCATAG GCTCCCTGGGC TCCCCTGGTC	ATCACAAAAAA TCAGACGCTCA AGTCAGAGGT GGCAGAAACCC GACAGGACTA 8900
8901	TAAGAGATACC AGGGGTTTCC CCGCTGGAAAGC TCCCTGGAAAGC	TCCGACCCCTG CGCCTCTCTC GATACTTACCG CGCCTCTCTC CTTCTGGGAA 9000
9001	GGCTGGGGCT TTCTCATAGC TCACGCTGTA GGATATCTCAG TTGGGGTAG	GTCGTTGCTGCT CCAAGCTGGG CTGTTGTCAC GAAACCCCG TTCAGCCCCA 9100
9101	CCGGTGGCGC TTATCCGGTA ACTATCGCT TGAGTCCAC CGGGTAAAGAC	ACGACTTATC GGCACGCTGCA GGCACGCTGCA GTCACAGAT TAGCAGAGCG 9200
9201	AGGTATGAG CCGCTGGTAC AGAGTCTGAG AAGTGGCGC CTAACATACCG	CTACACTAGA AGGACAGATG TTGGTATCTC CGCTCTGCTG AGGCAGCTTA 9300
9301	CCTTCGGAAA AAAGGTGGT AGGCTCTGAT CGGCAAAACA AACCAACGGCT	GGTAGGGGTG GTTTTTTGT TTGCAAGCAG CAGATTAGC GCAGAAAAAAA 9400
9401	AGGATCTCAA GAAGATCCTT TGATCTTTCT TAGCTCTTCTT GACCGCTCAGT	GGAACGAAAAA CTCACGTTAA GGATTTTGG TCATGAGATT ATCAAAAGG 9500
9501	ATCTTCACCT AGATCCCTT AAATTTAAAAA TGAAAGTTTA ATTCATCTA	AAAGTATATAT GAGTAACCT TTACCAATG TTACCAATG TTAATCAGTG 9600
9601	AGGACCTAT CTCAGCGATC TGTCATATTTC GTTCATCCAT AGTGGCTGA	CTCCCCGTG TGAGATAAC TAGGATAAC GAGGGCTAC CATTGGGCC 9700
9701	CAGTGTGCA ATGATACCGC GAGACCCAGC CTCACCGGT CCAGATTAT	CAGCAATAAA CCAGCAGGCC GGAGGGCCG AGCCAGAG GGGTCTGCA 9800
9801	ACTTTATCCG CCTCATCCA GTCTATTAAT TGTTGGCGGG AACCTAGAGT	AAGTAGTTCG CCAGTTAATAA GTTGTGCAA CGTTGTGCCC ATTGTCTACG 9900
9901	GCATCGTGGT GTCAAGCTCG TCGTTGGTA TGCTTCTCAT CACCTCCGGT	TCCCAACGAT CAAGGCGAGT TACATGATCC CCCATGTGT GCAAAAAAGC 10000
10001	GGTAGCTCC TTGCGTCC CGATCGTTCT CGAAGTAAAG TTGGCCGAG	TGTTATCCT CATGGTTATG GOAGCACTGC ATAATTCTCT TACTGTCTATG 10100
10101	CCATCCGTA GATGCTTTTC CGGCTGGCTT TGTCGACTGTA CCAAGTCATT	CTGAGAAATAG TGTTATGGGG GACCGAGTTG CTCTTGCCTG GCGTCAATAAC 10200
10201	GGGATAATAC CGGCCACAT AGCAGAACTT TAAAATGCT CATCAATTGGA	AAACGTTCTT CGGGGGAAA ACTCTCAAGG ATCTTACGC TGTTGAGATC 10300
10301	CAGTCGATG TAACCCACTC GTGCACTTCA CTGATCTTCA GCATCTTTA	CITTCACCAAG CGTTTCTGG TGAGCAAAA CAGAAGGCA AAATGCCGA 10400
10401	AAAAAGGGAA TAAGGGGAC ACGGAAATGT TGAATACCTCA TACTCTCTC	TTTTCAAAT TATTGAGCA TTATCAGGG TTATGCTC ATGAGGGGAT 10500
10501	ACATATTGTA ATGTTATTAG AAAATAAAC AAATAGGGT TCCGGCGRCA	TTTCCCGAA AGTGGCCACCA TGACGGGCC TGTTAGGGG CATTAGCGC 10600
10601	GGGGGGTGTG GTGGTTACGC CGCTACATT GCCAGGGCC	TAGGCCCCGC TCCTTCTGCT TTCTTCCCT CACGTTGCGC 10700
10701	GGCTTTCCCC GTCAAGCTCT AAATCGGGGC ATCCCTTCTAG GGTCCTTA CGGCACCTCG ACCCCAAAAA ACTTGATTAG GGTGATGGTT 10800	GGTCCACGT TCTTTAATAG TTGACTCTTG TTCCAAACTG GAACAACACT 10900
10801	CACGTAGTGG GCCATGCCCG TGATAGACGG TTGTTTGGCC	CGGCCTATG GTAAAGGATTT TTGCCCCATT GTCAGCTATG TTCCAAACTG 11000
10901	CAACCTATC TCGGTCTATT CTTTTGATT ATAAGGGATT TTAACATTTC	TTGCCCCATT GTCAGCTATG TTCCAAACTG TTCCAAACTG 11100
11001	TTAACAAAAA TATTACAAA ATATTAACGT TTACATTTC CCATTCGGCA	GGAACTGTTG GCAACTGTTG TCGGTGGGG CCTCTTCGCT 11100
11101	ATTACGCARG CTGGGAAAG GGGGATGTGC TGCAAGGGCA TAACTCTTGGG	TAACGCCAGG GTTTTCCCOAG TAACGACGTT GTAACTCTTGGG 11200
11201	AAGCTGACTT GGTAGCGGG CGCTAATAAGC ACTCACTATA	GGCCAGTCAG GGGTGGGG CCAGCTGAGC GGGCAAGGAC GGGCAAGTGGC 11200

# Fig. 12B-1

24/38

2107/1	ATG GCG CCC ATC ACG GCG TAC GCC CAG CAG AGA Q Q T A Y A Q Q T R G L L G C 1 I T S L T G R D K N Q V	2107/11	GGC CTC CTA GGG TGT ATA ATC ACC ACG CTG ACT GGC CGG GAC AAA AAC CAA GTG	2137/21	ACT GGC CGG GAC AAA AAC CAA GTG
2167/31	GAG GGT GAG GTC CAG ATC GTG TCA ACT GCT ACC CAA ACC TTC CTG GCA ACG TGC ATC AAT	2197/41	GGG GTA TGC TGG ACT GTC TAC CAC GGG GCC	2227/51	
E G E V Q I V S T A T Q T F L A T C I N G V C W T V Y H G A					
2257/61	GGA ACG ACC ATC GCA TCA CCC AAG GGT CCT GTC ATC CAG ATG TAT ACC AAT GTG GAC CAA GAC	2287/71	CCT GGG TGG CCC GCT CCT CAA GAC	2317/81	CTT GTG CCC GCT CCT CAA
G T R T I A S P K G P V I Q M Y T N V D Q L V G W P A P Q					
2347/91	GGT TCC CGC TCA TTG ACA CCC TGT ACC TGC GGC TCC CGC CTT TAC CTG GTC ACG AGG CAC GGC	2377/101	GAT GTC ATT CCC GTG CGC CGG CGA	2407/111	D V I P V R R R
G S R S L T P C T G S S D L Y T R H A D V I P V R R R					
2437/121	GGT GAT AGC AGG GGT AGC CTG CTT TCG CCC CGG CCC ATT TCC TAC TTG AAA GGC TCC TCG	2467/131	GGG GGT CCG CTG TTG TGC CCC GCG GGA CAC	2497/141	G G P L L C P A G H
G D S R G S L L S P R P I S Y L K G S S G G					
2527/151	GCC GTG GGC CTA TTC AGG GCC GCG GTG TGC ACC CGT GGA GTG GCT AAA GCG GTG GAC TTT ATC CCT	2557/161	GTG GAG AAC CTA GGG ACA ACC ATG	2587/171	N L G T T M
A V G L F R A V C T R G V A K A V D F I P V E N L G T T M					
2617/181	AGA TCC CCG GTG TTC ACG GAC AAC TCC TCT CCA CCA GCA GTG CCC CAG AGC TTC CAG GTG GGC CAC	2647/191	CCT GCT GGT CCC ACC GGC AGC GGT	2677/201	H L A P T G S G
R S P V F T D N S S P P A V P Q S F Q V A H L A P T G S G					
2737/221	AAG AGC ACC AAG GTC CCG GCT GCG TAC GCA GCC CAG GGC TAC AAG GTG TTG GTG CTC AAC CCC TCT	2737/221	GTT GCT GCA AGC CTG GGC TTT GGT	2767/231	T S V A A T L G F G
K S T K V P A A Y A A O G Y K V L V L N P S V A A T L G F G					
2797/241	GCT TAC ATG TCC AAG GCC CAT GGG GTT GAT CCT AAT ATC AGG ACC GGG GTG AGA ACA ATT ACC ACT	2827/251	GGC AGC CCC ATC ACG TAC TCC ACC	2857/261	
A Y M S K A H G V D P N I R T G V R T I T G S P I T Y S T					
2887/271	TAC GGC AAG TTC CTT GCC GAC GGG TGC TCA GGA GGT GCT TAT GAC ATA ATA ATT TGT GAC GAG TCC AC	2917/281	GGC TCC AGC TCC GAG TCC AGC TCC ACC CCC TTT TAC GGC AAG GCT ATC CCC CTC GAG GTG ATC	2947/291	
Y G K F L A D G G C S G A Y D I I C D E C H S T D A T S					
2977/301	ACT TTG GGC ATC GGC ACT GTC CTT GAC CAA GCA GAG ACT GGC GGG GCG AGA CTG GTT GTG CTC GCC	3007/311	ACT GCT ACC CCT CCG GGC TCC GTC	3037/321	
T V S H P N I E V L D Q V L A E T A G A R L V V L A T P G S V					
3157/331	AAG GGG GGA AGA CAT CTC ATC TTC TGC CAC TCA AAG AAG TGC GAC GAG CTC GCC GCG AAG CTG GTC GCA	3097/341	TTG GGC AAT GGC ATC CCC CTC GAG GTG ATC	3127/351	
K G G R H L I F C H S K K C D E L A K L V A L G I N A V					
3247/391	GCC TAC TAC CGC GGT CTT GAC GTG TCT GTC ATC CCG ACC AGC GGG GAT GTT GTC GTC ATG ACT GGC TTT ACC	3277/401	S T D A L M T G F T	3307/411	
A Y Y R G L D V S V I P T S G D V V V V V V V V V V					
3337/421	GGC GAC TTC GAC TCT GTG ATA GAC TGC AAC TAC CAG ACA GCA GTC GAT TTC AGC CTT GAC CCT ACC ATT GAG ACA ACC	3367/431	3397/441		
G D F D S V I D C N T C V T Q T V D F S L D P T F T I E T T					

## Fig. 12B-2

25/38

3427/451 ACG CTC CCC CAG GAT GCT GTC TCC AGG ACT CAA CGC CGG ACT GGC AAG CCC AGG ACT GGC AAG CCC ATC TAT AGA TTT GTG GCA CGG GGG T L P Q D A V S R T Q R R G R T G K P G I Y R F V A P G	3457/461 3517/481 GAG CGC CCC TCC GGC ATG TTC GAC TCG TCC GTC CTC TGT GAG TGC TAT GAC GCG GGC TGT GCT TGG TAT GAG CTC ACG CCC GCC GAG ACT E R P S G M F D S V L C E C Y D A G C A W Y E L T P A E T	3487/471 3577/501 3607/511 ACA GTT AGG CTA CGA GCG TAC ATG AAC ACC CCG GGG CTT CCC GTG CAG GAC CAT CTT GAA TTT TGG GAG GGC GTC TTT ACG GGC CTC T V R L R A Y M N T P G L P V C Q D H L E F W E G V F T G L
3697/541 ACT CAT ATA GAT GCC CAC TTT TTA TCC CAG ACA ARG CAG AGT GGG GAG AAC TAC CCT TAC CTG GTA GCG TAC CAA GCC ACC GTG TGC GCT T H I D A H F L S Q T K Q S G E N F P Y L V A Y Q A T V C A	3727/551 3787/571 AGG GCT CAA GCC CCT CCC CCA TCG TGG GAC CAG ATG TGG AAG TGT TTG ATC CGC CTT AAA CCC ACC CTC CAT GGG CCA ACA CCC CTG CTA R A Q A P P S W D Q M W K C L I R L K P T L H G P T P L L	3667/531 3757/561 3847/591 3887/601 TAC AGA CTG GGC GCT GTT CAG AAT GAA GTC ACC CTG ACG CAC CCA ATC ACC AAA TAC ATC ATG ACA TGC ATG TCG GCC GAC CTG GAG GTC Y R L G A V N E V T L T H P I T K Y I M T C M S A D L E V
3967/631 GTC ACG AGC ACC TGG GTG CTC GTT GGC GGC GTC CTG GCT GCT V T S T W V L V G G V L A A Y C L A Y C L S T G C V V I V G R	3997/641 4057/661 ATC GTC TTG TCC GGG AAG CCG GCA ATT ATA CCT GAC AGG GAG GTT CTC TAC CAG GAG ATG GAA GAG TGC TCT CAG CAC TTA I V L S G K P A I I P D R E V L Y Q E F D E M E E C S Q H L	3937/621 4117/681 4177/701 CCG TAC ATC GAG CAA GGG ATG CTC GCT GAG CAG TTC AAG GCA GGC CTC GTC CGC ACC GCG TCC CGC CAT GCA GAG GTT P Y I E Q G M M L A E Q F K Q K A L G L Q T A S R H A E V
4237/721 ATC ACC CCT GCT GTC CAG ACC AAC TGG CAG AAA CTC GAG GTC ATT TGG GCG AAG CAC ATG TGG AAT TTC ATC AGT GGG ATA CAA TAC TTG I T P A V Q T N W Q K L E V F W A K H M W N F I S G I Q Y L	4267/731 4327/751 GCG GGC CTG TCA ACG CTG CCT GGT AAC CCC GCC ATT GCT TCA TTG ATG GCT TTT ACA GCT GGC GTC ACC AGC CCA CTA ACC ACT GGC CAA A G L S T P G N P A I A S L M A F T A V T S P L T G Q	4297/741 4387/771 4447/791 4507/811 GGC GGC ATC GGC AGC GTT GGA CTG GGG ATT CTT GCA GGG TAT GGC GCG GGC GTG GGC GCA GCT CTT GTC CCT GGA GCC CTT GTC GGT G A A I G S V G L K V D I L A G Y G A G V A L V A
		4537/821 4627/851 4717/881 4687/871 GTC TGC GCA GCA ATA CTG CGC CGG CAC GTC GAG GGG GCA GTG CAA TGG ATG AAC CGG CTA ATA GCC TTC GCC TCC CGG V V C A A I L R R V G P G E G A V Q W M N R L I A F A S R

# Fig. 12B-3

4777/901 GGG AAC CAT GTT TCC CCC ACG CAC TAC GTG CCG GAG AGC GAT GCA GCC CGC GTC ACT GCC ATA CTC AGC AGC CTC ACT GTA ACC CAG  
 G N H V S P F H Y V P E S D A A R V T A I L S S L T V T Q  
 4867/931 CTC CTG AGG CGA CTG CAT CAG TGG ATA AGC TCG GAG TGT ACC ACT CCA TGC TCC GGT TCC TGG CTA AGG GAC ATC TGG GAC TGG ATA TGC  
 L L R R L H Q W I S S E C T T P C S G S W L R D I W D N I C  
 4957/961 GAG GTG CTG AGC GAC TTT AAG ACC TGG CTC AAA GGC AAG CTC ATG CCA CAA CTG CCT GGG ATT CCC TTT GTG TCC TGC CAG CGC GGG TAT  
 E V L S D F K T W L K A K L M P Q L P G I P F V S C Q R G Y  
 5047/991 AGG GGG GTC TGG CGA GGA GAC GGC ATT ATG CAC ACT CGC TGC CAC TGT GGA GCT GAG ATC ACT GGA CAT GTC AAA AAC GGG AGC ATG AGG  
 R G V W R G D G I M H T R C H C G A E I T G H V K N G T M R  
 5137/1021 ATC GTC GGT CCT AGG ACC TGC AGG AAC AAC TGG AGT TGG AGT GGG AGC TTC CCC ATT AAC GCC TAC ACC ACG GGC CCC TGT ACT CCC CTT CCT GCG  
 I V G P R T C R N M W S G T F P I N A Y T T G P C T P L P A  
 5227/1051 CCG AAC TAT AAG TTC GCG CTG TGG AGG GTG TCT GCA GAG GAA TAC GTG GAG ATA AGG CGG GTG GGG GAC TTC CAC TAC GTA TCG GGT ATG  
 P N Y K F A L W R V S A E Y V E I R R V G D F H Y V S G M  
 5317/1081 ACT ACT GAC AAT CTT AAA TGC CCG TGC CAG ATC CCA TCG CCC GAA TTG TTC ACA GAA TTG GAC GGG GTG CGC CTA CAC AGG TTT GCG CCC  
 T T D N L K C P C Q I P S P E F F T E L D G V R L H R F A P  
 5407/1111 CCT TGC AAG CCC TTG CTG CGG GAG GAG GTA TCA TTC AGA GTA TCA GGA CTC CAC GAG TAC CCG GTG GGG TCG CAA TTA CCT TGC GAG CCC GAA  
 P C K P L L R E E V S F R V G L H E Y P V G S Q L P C E P E  
 5497/1141 CCG GAC GTA GCC GTG TTG ACG TCC ATG CTC ACT GAT CCC TCC CAT ATA ACA GCA GAG GCG GGG AGA AGGG TTG GCG AGA GGG TCA CCC  
 P D V A V L T S M L T D P S H I T A E A A G R R S P  
 5587/1171 CCT TCT ATG GCC AGC TCC TCG GCT AGC CAG CTG TCC GCT CCA TCT CTC AAG GCA ACT TGC ACC GCC AAC CAT GAC TCC CCT GAC GCC GAG  
 P S M A S S S A S Q L S A P S L K A T C T A N H D S P D A E  
 5677/1201 CTC ATA GAG GCT AAC CTC CTG TGG AGG CAG GAG ATG GGC GGC AAC AAC ATC ACC AGG GTT GAG TCA GAG AAC AAA GTG GTG ATT CTG GAC TCC  
 L I E A N L L W R Q E M G N I T R V E S E N K V V I L D S  
 5767/1231 TTC GAT CCG CTR GTG GCA GAG GAG GAT GAG CGG GAG GTC TCC GTC GAA ATT CTG CCG AAG TCT CGG AGG TCC GCA TGT GTC CGG  
 F D P L V A E E D E V S V P A E I L R K S R R F A R A L  
 5857/1261 CCC GTC TGG GCG CGG GAC TAC AAC CCC CCG CTA GCA GAG ACC TGG AAA AAG CCT GAC TAC GAA CCA CCT GTG GTC CAT GCC TGC CGG  
 P V W A R P D Y N P P L V E T W K K P D Y E P P V V H G C P  
 5947/1291 CTA CCA CCT CCA CGG TCC CCT GTG CCT CGG CCT CGG AAA AAG CGT ACG GTG GTC CTC ACC GAA TCA ACC CTA TCT ACT GCC TTG GCC  
 L P P P R S P P R K K R T V L T E S T L S T A L A  
 6037/1321 GAG CTT GCC ACC AAA AGT TTT GGC AGC TCC TCA ACT TCC GGC ATT AGC GAC AAT AGC ACA ACA TCC TCT GAG CCC CCT TCT GGC  
 E L A T K S F G S S T S G I T G D N T T S S E P A P S G

27/38

Fig. 12B-4

28/38

**Fig. 12B-5**

7477/1801	AAT TCC TGG CTA GGC AAC ATA ATC ATG TTT GCC CCC ACA CTG TGG GCG AGG ATG ATA CTG ATG ACC CAT TTC ATT AGC GTC CTC ATA GCC
N S W L G N I I M F A P T L W A R M I L N T H F F S V L I A	
7567/1831	AGG GAT CAG CTT GAA CAG GCT CTT AAC TAC TCC TAC GGA GCC TGGC TAC GAG ATC TAC GGA GCA CCT CCA ATT CAA AGA
R D Q L E Q A L N C E I Y G A C Y S I E P L D L P I I Q R	
7657/1861	CTC CAT GGC CTC AGC GCA TTT TCA CTC CAC AGT TAC TCT CCA GGT GAA ATC AAT AGG GTG GCC GCA TGC CTC AGA AAA CTT GGG GTC CCG
L H G I S A F S I H S Y S P G E I N R V A A C L R K L G V P	
7747/1891	CCC TTG CGA GCT TGG AGA CAC CGG GCC CGG AGC GTC CGC GCT AGG CTT CTG TCC AGA GGA GGC AGG GCT GCC ATA TGT GGC AAG TAC CTC
P L R A W R H R A R S V R A R L L S R G G R A A I C G K Y L	
7837/1921	TTC AAC TGG GCA GTA AGA ACA AAG CTC AAA CTC ACT CCA ATA GCG GCT GCC CGG CGG CTG GAC TTG TCC GGT TGG TTC ACG GCT GGC TAC
F N W A V R T K L K L T P I A A G R L D L S G W F T A G Y	
7927/1951	AGC GGG GGA GAC ATT TAT CAC AGC GTG TCT CAT GCC CGG CCC CGC CGC TGG TTC TGG TTT TGC CTA CTC GCT GCA GGG GTA GGC ATC
S G D I Y H S V S H A R P R W F C L L A G V G I	
8017/1981	TAC CTC CTC CCC AAC CGA TGA
Y L L P N R *	

7537/1821  
7507/1811  
7597/1841  
7627/1851  
7687/1871  
7717/1881  
7777/1901  
7807/1911  
7867/1931  
7897/1941  
7987/1971  
8047/1991  
8077/2001

29/38

*Fig. 13A*

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1 gcccggccccc tggatgggggc gacactccac catgaatcac tccccctgtga ggaactactg
61 ttttacacgca gaaagcgtct agccatggcg ttagtatgag tgtcgatcg cctccaggac
121 cccccctccc gggagagcca tagtggctcg cgaaaccggg gagtacaccg gaattgccag
181 gacgccccggg tcctttcttg gataaaaaaccg ctcacatgcct ggagatggg gcgtgcccc
241 gcaagactgc tagcccgatgatgatgggctcg cgaaaggcc ttgttgtact gcctgatagg
301 gtgcttgcga gtgccccggg aggtctcgta gaccgtgcac catgagcaca aatccctaaac
361 ctcaaaagaaa aaccacaaacgt aacaccaacc gtcgcccaca ggacgtcaag ttcccggtg
421 gcggtcagat cgttgggtgg gtttacttgc tgccgcgcg gggccctaga ttgggtgtc
481 gcgcgacgag gaagacttcc gagcggcgcg aacctcgagg tagacgtcag cctatccca
541 aggacacgtcg gcccggggc aggacctggg ctcagcccg gtaccctgg cccctctatg
601 gcaatgaggg ttgcgggtgg gccccatggc tcctgtctcc ccgtggctct cggcctagct
661 ggggccccac agaccccccgg cgtaggtcgc gcaatttggg taagtcata gatacccta
721 cgtgcggcctt cggcgaccc tcggggataca taccgtcgat cggcggccctt cttggaggcg
781 ctgcccgggc cctggcgcat ggctgcggg ttctggaaaga cggcgtgaac tatgcaacag
841 ggaacattcc tgggtgtct ttctctatct tcctgtcg cctgtctct tgcctgactg
901 tgcccgcttc agcctaccaa gtgcgaatt ctcgggggtt taccatgtc accaatgatt
961 gcccataactc gagtattgtg tacgaggcgg cccatgtccat cctgcacact ccgggggtgt
1021 tcccttgcgt tcgcgagggt aacgcctcga ggtgtgggt ggcgggtgacc cccacgggtgg
1081 ccaccaggga cggcaaaactc cccacaacgc agcttcgac tcataatcgat ctgcttgcg
1141 ggagcgccac cctctgtcg gcccctacg tgggggacct gtgcgggtct gtcttcttg
1201 ttggtcaact gtttaccttc tctcccaaggc gccactggac gacgcaagac tgcaatttgg
1261 ctatctatcc cggccatata acgggtcatac gcatggcatg ggatatgtg atgaactgg
1321 cccctacggc agcgttggg gtagctcagc tgctccggat cccacaagcc atcatggaca
1381 tgatcgctgg tgctcaactgg ggagtctgg cgggcatagc gtatttctcc atgggtggga
1441 actggggcga ggtctggta gtgcgtcg tatttgcgg cgtgcacgc gaaacccacg
1501 tcacccgggg aaatgcccggc cgcacccagg ctgggttttgcgtt tggttcctt acaccaggcg
1561 ccaaggcggaa catccaactg atcaacacca acggcagttt gcacatcaat agcacggcct
1621 tgaattgcaaa taaaaggcattt aacacccggct ggttagcagg gctttctat caacacaaat
1681 tcaactcttc aggctgtctt gagaggttgg ccagctggc acgccttacc gattttggcc
1741 agggctgggg tcctatcagt tatgccaacg gaagcggctt cgacgaacgc ccctactgct
1801 ggcactaccc tccaagaccc tggggcattt tgccgc当地 gacgtgtg gccccggat
1861 attgcttccat tcccagccccc gtgggtgtgg gaaacgaccga caggtcgccg ggccttaccc
1921 acagctgggg tgcaaatgtt acggatgtct tgctctttaa caacaccagg ccaccgttgg
1981 gcaattgggtt cgggtgtacc tggatgaaact caactgttggt caccaaagtg tgcggagcgc
2041 ccccttgcgtt catcgaggaa gtggcaaca acacccgtt ctgcceccact gattgttcc
2101 gcaaaatccc ggaaggccaca tactctcggt gcccgtccgg tccctggatt acacccagg
2161 gcatggtcga ctacccgtat aggcttggc actatcctt taccatcaat tacaccat
2221 tcaaagtca gatgtacgtg ggaggggtcg agcacaggctt ggaagcggcc tgcaactgg
2281 cgcggggcga acgctgtgtat ctggaaagaca gggacaggctt cgagctcagc ccgtgttgc
2341 tggccaccac acagtggcag gtccttccgt gttcttccat gacccgtccca gcctgttcca
2401 cccgcctcat ccaccccttccac cagaacattt tgacgtgcgtt gtaactgtt ggggttaggg
2461 caagcatcgcc gtcctggggc attaagtggg agtacgtcg tctctgttcc ttctgttcc
2521 cagacgcgcg cgtctgtcc tgggtgtgg tggatgttact catatccaa gggaggccgg
2581 ctttggagaa cctcgtaata ctcacatcgat ctcacatcgat ccccttggc cgggaecac ggtcttgg
2641 ctttccctcgat gttttcttgc tttgcgtggg atctgttggg taggtgggtg cccggagccgg
2701 tctacggccctt ctacggatg tggcctctcc tcctgtccct gctggcgtt gctcagccgg
2761 catacgcact ggacacggag gtggccgcgt cgtgtggccg cgttggctt gtcgggtttaa
2821 tggcgctgac tctgtcgcca tattacaaggc gctatatcgat ctggtgcgt tggtggcttcc
2881 agtattttctt gaccagagta gaagcgcac tgacgtgtt ggttccccc ctcaacgtcc
2941 gggggggggc cgatggcgcc atcttactca tggatgttactt acacccgacc ctggatatttgc
3001 acatcacccaa actactcttgc gccatcttgc gaccctttt gattttcaaa gccagtttgc
3061 ttaaaatccc ctacttcgtt cgcgttcaag gccttctccg gatctgcgcg ctagcgcgga

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*Fig. 13B*

30/38

3121 agatagccgg aggtcattac gtgcaaattgg ccatcatcaa gttaggggcg cttaactggca  
 3181 cctatgtgtta taaccatctc acccccttctc gagactggc gcacaacggc ctgcyyagatc  
 3241 tggccgtggc tggtaacca gtcgtcttc cccgaatggc gaccaagctc atcacgtgg  
 3301 gggcagatac cgcccggtgc ggtgacatca tcaacggctt gcccgtctc gcccgttaggg  
 3361 gccaggagat actgttggg ccagccgacg gaatggtctc caaggggtgg aggttgcgtgg  
 3421 cgcggatcac ggcgtacggc cagcagacga gaggcctct aggtgtata atcaccagcc  
 3481 tgactggccg ggacaaaaac caagtggagg gtgaggtcca gatcgtgtca actgctaccc  
 3541 aaaccttctt ggcaacgtgc atcaatgggg tatgtggac tgtctaccac ggggccccaa  
 3601 cgaggaccat cgcatcaccc aagggtctg tcatccagat gtataccaaat gtggaccaag  
 3661 accttgggg ctggcccgct cctcaagggtt cccgctcatt gacaccctgt acctgcggct  
 3721 cctcgacact ttacctggc acgaggcagc ccgatgtcat tcccgtgcgc cggcgagggt  
 3781 atagcagggg tagcctgctt tcgccccggc ccatttccta ctgaaaggc tcctcgaaaa  
 3841 gtccgcgttt gtccccggc ggacacggcg tgggcctatt cagggccgcgt gtgtgcaccc  
 3901 gtggagtggc taaaggcggtg gactttatcc ctgtggagaa cctagggaca accatgagat  
 3961 ccccggtgtt cacggacaaac tccttccac cagcagtcc ccaagacttc caggtggccc  
 4021 acctgcacgc tcccaccggc agcgtaaga gcaccaagggt cccggctcg tacgcagccc  
 4081 agggctacaa ggtgttgggt ctcaaccctt ctgttgcgtc aacgctggc tttgggtctt  
 4141 acatgtccaa ggcccatggg gttgatccta atatcaggac cggggtgaga acaattacca  
 4201 ctggcagccc catcacgtac tccacccatcg gcaagttctt gcaaggcttctc tgccgacggc  
 4261 gaggtgctta tgacataata atttgtgacg agtgcacactc cacggatgccc acatccatct  
 4321 tgggcacatgg cactgtcctt gaccaaggcag agactgcggg ggcgagactg gttgtctcg  
 4381 ccactgtcac ccctccgggc tccgtcaactg tggccatcc taacatcgag gaggtgtctc  
 4441 tggccaccac cggagagatc cccttttacg gcaaggcttat cccctcgag gtgatcaagg  
 4501 gggaaagaca tctcatcttc tgccactcaa agaagaatg cgacgacttc gccgcgaagc  
 4561 tggtcgacatt gggcatcaat gccgtggctt actacccggg tctgtacgtg tctgtcatcc  
 4621 cgaccagcg gcatgttgcgt gtcgtgtcga ccgatgtctt catgactggc ttacccggc  
 4681 acttcgactc tggatagac tgcaacacgt gtgtcaactca gacagtcgtat ttcagccctt  
 4741 accctacattt taccatttag acaaccacgc tcccccaagga tgctgtctcc aggactcaac  
 4801 gcccgggcag gactggcagg gggaaaggcag gcatctatag atttgtggca ccgggggagc  
 4861 gcccctccgg catgttcgac tcgtccgtcc tctgtgagtg ctatgacgcg ggctgtgtt  
 4921 ggtatgagct cacggccggc gagactacag ttaggctacg agcgtacatg aacaccccg  
 4981 ggcttcccggt gtgccaggac catcttgaat ttggggaggg cgtctttacg ggcttcaactc  
 5041 atatacatgc ccactttttt tcccagacaa agcagatgg ggagaacttt ctttacactgg  
 5101 tagcgtacca agccaccgtg tgccgttaggg ctcaaggccc tccccatcg tgggaccaga  
 5161 tgtggaaatgt ttgtatccgc cttaaaccctt ccctccatgg gccaacaccc ctgtatata  
 5221 gactggcgc tggcataaat gaagtcaacc tgcacgcaccc aatcaccaaa tacatcatga  
 5281 catgcacgtc ggccgacctg gaggtcgta cggacacctg ggtgctcgat ggcggcgtcc  
 5341 tggctgtctt ggccgctat tgccgtcaaa caggctgcgt ggtcataatg ggcaggatcg  
 5401 tcttgcacgg gaagccggca attatactg acagggaggt tcttaccacg gagttcgatg  
 5461 agatggaaaga gtgtctctcact cacttaccgt acatcgacgca agggatgtat ctcgctgagc  
 5521 agttcaagca gaaggccctc ggccctctgc agaccgcgtc cgcgcattgcgca gaggttatca  
 5581 cccctgtgtt ccacggacaaac tggcagaaac tcgagggttt ttggggcaag cacatgtgga  
 5641 atttcatcg tggatcacaa tacttggcg gctgtcaac gtcgcctgg aaccccgcca  
 5701 ttgcttcattt gatggctttt acactgcggc tccacccatcg actaaccact ggccaaaccc  
 5761 tcccttcaat catattgggg ggggggtgg ctggccatcg cggccatcgat cagcgttgg  
 5821 ctgcctttgt ggggtgtggc ttagctggcg cggccatcgat cggccatcgat cagcgttgg  
 5881 tccctgtggc cattcttgcg gggatggcg cggccatcgat cggccatcgat cagcgttgg  
 5941 agatcatcgat cggtgagggt ccctccacgg aggaccttgtt caatctgtg cccgcacatcc  
 6001 tctcgcttgg agcccttgcg tgcgggtgg tctgcgcacgca aatactgcgc cggcacgttg  
 6061 gcccgggcga gggggcagtg caatggatga accggctaat agccttcgc tcccggggga  
 6121 accatgtttt ccccacgcac tacgtggccgg agagcgatgc accgcggccgc gtcactgc  
 6181 tactcagcag ctcactgtat acccgacttc tgaggcgact gcatcgtgg ataagctgg  
 6241 agtgtaccac tccatgtctt ggttccgtgg taaggacat ctggactgg atatgcgagg  
 6301 tgctgagcga cttaagacc tggctgaaag ccaagctcat gccacaactg cctggattc  
 6361 cctttgtgtc ctggccagggc gggataggg ggtctggcg aggagacggc attatgcaca  
 6421 ctgcgtgcac ctgtggagct gagatcactg gacatgtcaa aaacgggacg atgaggatcg  
 6481 tcggtccttag gacctgcagg aacatgtgaa tggggacgtt cccattaaac gcctacacca

31/38

*Fig. 13C*

6541 cgggccccctg tactccctt cctgcgccga actataagtt cgcgctgtgg agggtgtctg  
 6601 cagaggaata cgtggagata aggccggtgg ggacttcca ctacgtatcg ggtatgacta  
 6661 ctgacaatct taaatgcccgg tgccagatcc catcggccga atttttcaca gaattggacg  
 6721 gggtgtcgct acacagggtt gcgcccccctt gcaagccctt gctgcgggag gaggtatcat  
 6781 tcagatgtt actccacggag taccgggtgg ggtcgcaattt accttgcgag cccgaaccgg  
 6841 acgttagccgt gttgacgtcc atgctcaactg atccctccca tataacagca gagggcgccg  
 6901 ggagaagggtt ggcgagaggg tcacccctt ctatggccag ctccctcggt agccagctgt  
 6961 ccgctccatc tctcaaggca acttgacccg ccaaccatga ctccctgtac gccgagctca  
 7021 tagaggctaa cctccgtgg aggcaggaga tggcgccaa catcaccagg gttgagtcag  
 7081 agaacaaagt ggtgattctg gactccttcg atccgttggt ggcagaggag gatgagccgg  
 7141 aggtctccgt acctgcagaa attctgcgga agtctcgag attcgcggg gccctgccc  
 7201 tctgggcgctg gccggactac aaccccccgc tagtagagac gtggaaaaag cctgactacg  
 7261 aaccacctgt ggtccatggc tgcccgctac cacctccacg gtccctccct gtgcctccgc  
 7321 ctgcggaaaaa gcgtagcggtg gtcctcacccg aatcaaccctt atctactgccc ttggccgagc  
 7381 tggccaccaa aagtttggc agetcctcaa ctcccgcat tacggcgac aatacgacaa  
 7441 catcctctga gccccccccc tctggctgcc ccccccggactc cgacgtttag tcctatttt  
 7501 ccatgcccccc cctggagggg gaggctggg atccggatct cagcagccgg tcatggtcga  
 7561 cggtcagtag tggggccgac acggaagatg tcgtgtgctg ctcaatgtct tattccttgg  
 7621 caggcgcaact cgtcaccccg tgcgctcggtt aagaacaaaaa actgcccattt aacgcactga  
 7681 gcaactcggtt gctacgcccattt cacaatctgg tgattccac cacttcacgc agtgcggcc  
 7741 aaaggcagaa gaaagtccaca tttgacagac tcaagtttggt ggacagccat taccaggacg  
 7801 tgctcaagga ggtcaaaagca gcggtcaaa aagtgaaggc taacttgcata tccgttaggg  
 7861 aagtttgcag cctgacgcccccc ccacatttgcag cccaaatccaa gtttggctat ggggcaaaaag  
 7921 acgtccgttgc ccatgcccaga aaggccgtag cccacatcaa ctccgtgtgg aaagacccccc  
 7981 tggaaagacacatc tgtaacacca atagacacta ccatcatggc caagaacgag gtttctcg  
 8041 ttccggcttgc gaaaggggggt cgtaaaggccatc ctcgtctcat cgtgttcccc gacctggcc  
 8101 tgcgcgtgtg cgagaagatg gccctgtacg acgtgggttag caagctcccc ctggccgtga  
 8161 tgggaagctc ctacggattt caataacttac caggacagcg gttgaattt ctcgtcaag  
 8221 cgtggaaagtc caagaagacc ccgatgggt ttcgttatgc taccctgtt tttgactcca  
 8281 cagtcaacttgc gagcgcacatc cgtacggagg aggcaattt ccaatgttgc gacctggacc  
 8341 cccaaaggcccg cgtggccatc aagtccctca ctgagaggct ttatgttggg gccccttta  
 8401 ccaatttcaag gggggaaaaac tgcggctacc gcagggtgccg cgcgagccgc gtaactgacaa  
 8461 ctatgttgg taacacccttcc acttgcgtaca tcaaggcccg ggcagctgtt cgagcccgac  
 8521 ggctccaggatc ctgcacccatg ctcgtgtgtt ggcacacttgc agtgcgttac tggaaagtg  
 8581 cgggggttcca ggaggacccgc gcgagcttgc gagecatttgc ggaggctatg accaggtaat  
 8641 cggccccccccc cggggaccccccc ccacaaccatc aatacgacttgc ggagcttata acatcatgt  
 8701 cctccaaactgt gtcagtcgtcc cagcaggccg ctggaaagag ggtctactac cttacccgt  
 8761 accctacaac ccccttcgtcc agagcccgatc gggagacagc aagacacactt ccagtcaatt  
 8821 cctggcttgc caacataatc atgtttggcc ccacactgttgc ggcgaggatg atactgtatga  
 8881 cccatttttgc tagcgtccctc atagccaggatc atcgttgc acaggcttca aactgtgaga  
 8941 tctacggagc ctgtcaactcc atagaaccatc tgatctacc tccaaatcattt caaagactcc  
 9001 atggccttgc cgcattttca ctccacatgtt acttccagg tggaaatcaat agggtggccg  
 9061 catgcttcgttcaaaaatgggg tgcgagcttgc gagacaccgg gcccggagccg  
 9121 tccggcttagt gctttgtcc agaggaggca gggcttgcattt atgtggcaag tacctcttca  
 9181 actggggactt aagaacaaatgg ctc当地actca ctccaaatgc ggccgcttgc cggctggact  
 9241 tgcgtgttgc gttcactggctt ggctacagcg gggagacat ttatcacttgc gtttcttgc  
 9301 cccggcccccccttgc tccgttgcgg ttttgccttac tccgttgc tgcagggtt ggcatttacc  
 9361 tccctcccaatc cgcatttgcgg tttgggtttaaa cactccggcc tcttaagccca tttcccttgc  
 9421 ttt  
 9481 ttt  
 9541 aggtccgttgc ggcgcatttgc tgcagagatc gctgtacttgc agatcatgtt

32/38

*Fig. 13D*

MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRL  
 GVRATRKTSERSQPRGRRQPPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRG  
 SRPSWGPTDPRRRSRNGLKVIDTLCGFADLMGYIPLVGAPLGAARALAHGVRVLED  
 GVNYATGNLPGCSFSIFLLALLSCLTVPASAYQVRNSSGLYHVTNDCPNSSIVYEAAD  
 AILHTPGCVPVCVREGNASRCWAVTPVTATRDGKLPTQLRRHIDLLVGSATLCSALY  
 VGDLCGSVFLVQQLFTFSPRRHWTQDCNCISYPGHITGHRMAWDMMMNWSPTAALVV  
 AQLLRIPQAIMDMIAGAHGCVLAGIAYFSMVGNNWAKVLVLLLFAFGVDAETHVTGGNA  
 GRTTAGLVGLLTPGAKQNIQLINTNGSWHINSTALNCNESLNTGWLALFYQHKFNSS  
 GCPERLASCRRLTDFAQGWGPISYANGSGLDERPYCWHPRPCGIVPAKSVCVPVYC  
 FTPSPVVVGTTDRSGAPTYSWGANDTDVFVILNNTRPPLGNWFGCTWMNSTGFTKVCGA  
 PPCVIGGVGNNTLLCPTDCFRKHPEATYSRCGSGPWITPRCMVDYPYRLWHYPCTINY  
 TIFKVRMYVGGVEHRLEAACNWTRGERCDLEDRDRSELSPLLLSTTQWQVLPCSFTTL  
 PALSTGLIHLHQNIVDVQYLYVGVSSIASWAIKWEYVLLFLLLADARVCSCLIWMMLL  
 ISQAEAALENLVLNAASLAGTHGLVSFLVFFCFAWYLKGRWPGAVYALYGMWPLL  
 LLLALPQRAYALDTEVAASC GG VLVGLMALTLS PYY KRY ISWC MWWLQYFLTRVEAQ  
 LHVVWVPLNVRGGRDAVILLMCVVHPTLVFDITKLLAIFGPLWILQASLLKVPYFVR  
 VQGLLRICALARKIAGGHYVQMAIIKLGALTGTYVYNHPLRDWAHNGLRLDIAV  
 PVVFSRMETKLITWGADTAACGDIINGLPVSARRGQEILLGPADGMVSKGWRLLAPIT  
 AYAQQTRGLLGCIIITSLTGRDKNQVEGEVQIVSTATQTFLATCINGVCWTVYHGAGTR  
 TIASKGPVIQMYTNVDQDLVGPAPQGSRSLT PCTCGSSDLYLVTRHADVIPVRRRG  
 DSRGSLLSPRPISYLGSSGGPLLC PAGHAGVLFRAAVCTRGVAKAVDFIPVENLGTT  
 MRS PVFTDNSSPPAVPQSFQVAHLHAPTGSGKSTKVPAAYAAQGYKVLVLNPSVAATL  
 GFGAYMSKAHVDPNIRTGVRTITTGSPITYSTYGFILADGGCSGGAYDIIICDECHS  
 TDATSILGITVLDQAE TAGARL VV LATA T PPGS VTVSHPNIEEVALSTTGEIPFYGK  
 AIPLEVIGGRHLIFCHSKKCDELAALKVALGINAVAYYRGLDVS VIPTSGD VVVVS  
 TDALMTGFTGDFDSVIDCNTCVTQTVDFSLDPTFTIETTLPQDAVSRTQRRGRTGRG  
 KPGIYRFVAPGERPSGMFDSSVLCECYDAGCAWYELTPAETTVRLRAYMNTPLPVCQ  
 DHLEFWEGVFTGLTHIDAHFLSQTKQSGENFPYLVAYQATVCARAQAPPSWDQMWC  
 LIRLKPTLHGPTPLLYRLGAVQNEVTLTHPITKYIMTCMSADLEVVTSTWVLVGGVLA

33/38

*Fig. 13E*

ALAAAYCLSTGCVVIVGRIVLSGKPAIIIPDREVLYQEFDEMEECSQHLPYIEQGMMIAE  
QFKQKALGLLQTASRHAEVITPAVQTNWQKLEVFWAKHMWNFISGIQYLAGLSTLPGN  
PAIASLMAFTAATVSPLTGQTLLFNILGGWVAAQLAAPGAATAFVGAGLAGAAIGSV  
GLGKVLVDILAGYGAGVAGALVAFKIMSGEVPSTEDLVNLLPAILSPGALVVGVVCAA  
IIRRHHVGPGEGAVQWMNRLIAFASRGNHVSPTHYVPESDAARVTAILSSLTVTQLLR  
RLHQWISSECTTPCGSGSWLRDIWDWICEVLSDFKTWLKAKLMPQLPGIPFVSCQRGYR  
GWWRGDGIMHTRCHCGAEITGHVKNGTMRIVGPRTCERNMWSGTFPINAYTTGPCTPLP  
APNYKFALWRVSAEYVEIRRVGDFHYVSGMTTDNLKCPCQIPSPEFFTLDGVRLHR  
FAPPCKPLLREEVSFRVGLHEYPVGSQLPCEPEPDVAVLTSMLDPSHITAEAAGRLL  
ARGSPPSMASSSASQLSAPSLKATCTANHDSPDAELIEANLLWRQEMGGNITRVESEN  
KVVIILDSFDPLVAEEDEREVSVPAEILRKSRRFARALPVWARPDYNPPLVETWKKPDY  
EPPVVHGCPPLPPRSPVPPPRKKRTVVLTESTLSTALAELATKSFGSSSTSGITGDN  
TTTSSEPAAPSGCPPDSDVESYSSMPPLEGEPGDPDLSDGSWSTVSSGADTEDVVCCSM  
SYSWTGALVTPCAAEEQKLPINALSNSLLRHHLVYSTTSRSACQRQKKVTFDRLQVL  
DSHYQDVLKEVKAAASKVKANLLSVEEACSLTPPHSAKSFKGYGAKDVRCHARAKAVAH  
INSVWKDLLEDSTVPIDTTIMAKNEVFCVQPEKGGRKPARLIVFPDLGVRVCEKMALY  
DVVKSLPLAVMGSSYGFQYSPGQRVEFLVQAWKSKKTPMGFSYDTRCFDSTVTESDIR  
TEEAIIYQCCDLDPQARVAIKSLTERLYVGGPLTNSRGENCYRRCRASGVLTTCGNT  
LTCYIKARAACRAAGLQDCTMLVCGDDLVVICESAGVQEDAASLRAFTEAMTRYSAPP  
GDPPQPEYDLELITSCSSNVSAHDGAGKRVYYLTDPTTPLARAAWETARHTPVNSW  
LGNIIMFAPTLWARMILMTHFFSVLIARDQLEQALNCEIYGACYSIEPLDLPIIQR  
HGLSAFSLHSYSPGEINRVAACLRKLGVPPRLRAWRHRARSVRARLLSRGGRAAICGKY  
LFNWAVRTKLKLTPIAAAGRDLSGWFTAGYSGGDIYHSVSHARPRWFWFCLLLLAAAG  
VGIYLLPNR"

*Fig. 14A*

34/38

1 gccagcccccc tcatgggggc gacactccac catgaatcac tccccgtgaa ggaactactg  
 61 tcttcacgca gaaagcgtct agccatggcg ttatgtatgg tgcgtgcag cctccaggac  
 121 cccccctccc gggagagcca tagtggtctg cgaaccggg gatgacaccg gaattgcccag  
 181 gacgaccggg tcctttcttg gataaaccgg ctcataatgcct ggagatttgg gcgtgcccc  
 241 gcaagactgc tagccgagta gtgttgggtc gcggaaaggcc ttgtgtact gcctgatagg  
 301 gtgttgcga gtgccccggg aggtctcgta gaccgtgcac catgacacg aatccctaaac  
 361 ctcaaaagaaa aaccaaacgt aacccaacc gtcggccaca ggacgtcaag ttcccgggtg  
 421 jcggtagat cggttgttga gtttacttgt tgccggcga gggccctaga tgggtgtgc  
 481 ggcgcacgag gaagacttcc gagcggcgc aacctcgagg tagacgtcag cctatccca  
 541 aggacacgtcg gcccggggc aggacctggg ctcagccgg gtaccctgg cccctctatg  
 601 gcaatgaggg ttgggggtgg gcggtatggc tcctgtctcc ccgtggctct cggcttagct  
 661 ggggccccac agacccccgg cgtaggtcgc gcaatttggg taaggcatc gatacccta  
 721 cgtgcggctt cgccgaccc tggggtaca taccgctcg cggcgccccctt cttggaggcg  
 781 ctgccagggc cctggcgcata ggcgtccggg ttcttggaa cggcgtgaac tatgcaacag  
 841 gaaaccttcc ttgttgcctt ttctctatct tccttctggc ctcgtctct tgcctgactg  
 901 tgcccgcttc agccatccaa gtgcgcaatt ctcggggctt taccatgtc accaatgatt  
 961 gcccataactc gagtttgttgc tacggggcg cccatggccat ctcgtacact cgggggtgtg  
 1021 tcccttgcgt tcgcgagggt aacgcctcga ggtgttggg ggcgtgacc cccacgggtgg  
 1081 ccaccagggaa cggccaaactc cccacaacgc agcttcgacg tcatatcgat ctgcttgcg  
 1141 ggagcgccac cctctgcctg gcccctacg tgggggacct gtgcgggtct gtcttcttg  
 1201 ttggtcaact gttacccctc tctcccaaggc accactggac gacgcaagac tgcaattgtt  
 1261 ctatctatcc cggccatata acgggtcata gcatggcatg gaatatgtat atgaactgg  
 1321 cccctacgac agcgttgggt gtagctcagc tgctccgaat cccacaagcc atcatggaca  
 1381 tgatcgctgg cggccactgg ggagtctctgg cgggcataaa gtatttctcc atggtgggg  
 1441 actggggcga ggtctctggta gtgcgtctgc tatttgcgg cgtcgcacgc gaaacccacg  
 1501 tcacccggggaa aatggccgc cgcaccaagg ctgggttgc tggtcctt acaccaggcg  
 1561 ccaaggagaa catccaaactg atcaacacca acggcaggta gacatcaat agcacggc  
 1621 tgaactgcata tgaaaaggctt aacaccggct ggttagcagg gctcttctat cagcacaaat  
 1681 tcaactcttc aggctgtctt gagaggttgg ccagctggcc acgccttacc gatttggcc  
 1741 agggctgggg tcctatcaatg tatgccaacg gaagggccct cgacgacgc ccctactgct  
 1801 gcaactaccc tccaagaccc tggcatttgc tggccgcataa gacgtgtgt ggcgggttat  
 1861 attgcttcac tcccagcccc ggggtggg gaacgaccga caggtggc ggccttacact  
 1921 acagctgggg tgcaaatgtat acggatgtct tcgtctttaa caacaccagg ccaccgctgg  
 1981 gcaattgggtt cgggttacc tggatgaact caactggattt cccaaatgt tgccggagcgc  
 2041 ccccttgcgtt catggggggg tggggcaaca acacccatgt ctggccactt gattgttcc  
 2101 gcaaatatcc ggaagccaca ttttttttttgcg tggcgtccgg tccaggattt acaccagg  
 2161 gcatggtcga ctacccgtat aggcttggc actatccctt taccatcaat tacaccat  
 2221 tcaaaggatcg gatgtacgtg ggaggggtcg agcacaggctt ggaaggccca tgcaactgg  
 2281 cgcggggcga acgtgtgtat ctggaaagaca gggacagggtc cgagctcagc ccgtgctgc  
 2341 tgtccaccac acgtggcag gtccttcgt gtctttcac gacccgtcca gcctgttcca  
 2401 cccggctcat ccaccccttccac cagaacatttgc tggacgtgc gatcttgc ggggttaggt  
 2461 caagcatcgcc gtcctggggc attaagggg agtacgtctgc tctctgttcc ttctgttcc  
 2521 cagacgcgcg cgtctgttcc tgcttgcgtt gatgttactt catatccaa ggggggggg  
 2581 cttggagaa cctctgtatata ctcataatgcat cttccctggc cgggacgc ggtcttgc  
 2641 ctttttcgtt gttttctgc tttgcgttgc atctgtatggg taggtgggtg cccggagccg  
 2701 tctacccctt cttacggatg tggccttc tccctgtctt gctggcgttgc ctcagccgg  
 2761 catacgcact ggacacggag gtggccgcgt cgtgtggcg gttttttttt gtcgggtttaa  
 2821 tggcgctgac tctgtcgcca tattacaaggc gctatatcgat ctggtgc gatgttcc  
 2881 agtatttttctt gaccagagta gaagcgaac tgcacgtgtg gttttttttt ctcacgtcc  
 2941 gggggggggc cgtatggcgtt atcttactca cgtgtgtat acaccggcc ctggtatttgc  
 3001 acatcacccaa actactccgtt gccatccgtt gaccctttt gattttcaa gccagtttgc  
 3061 ttaaaatccc ctacttcgtt cgcgttcaag gccttctccg gatctgc gtagcgcgga

35/38

*Fig. 14B*

3121 agatagccgg aggtcattac gtgcaaatgg ccatcatcaa gttaggggcg cttaactggca  
 3181 cctgtgtta taaccatctc gtcctcttc gagactgggc gcacaacggc ctgcgagatc  
 3241 tggccgtggc tggaaacca gtcgtcttct cccgaatggg gaccaagctc atcacgtggg  
 3301 gggcagatac cgccgcgtgc ggtgacatca tcaacggctt gcccgtctc gcccgtaggg  
 3361 gccaggagat actgttggg ccagccgacg gaatggtctc caaggggtgg aggttgcgtgg  
 3421 cgcctacac ggcgtacgcc cagcagacga gaggccctt aggtgtata atcaccagcc  
 3481 tgactggccg ggacaaaacaa caagtggagg gtggatgtca gatcgttca actgttaccc  
 3541 agaccttctt ggcaacgtgc atcaatgggg tatgtggac tgcgttccac gggggccggaa  
 3601 cgaggaccat cgcatcaccc aagggtccctg tcatccagac gtatccaat gtggatcaag  
 3661 acctcggtgg ctggcccgct cctcaaggtt cccgcttatt gacacctgc acctgcggct  
 3721 cctcgaccc ttacctggtc acgaggacacg ccgtatgtcat tcccgccgc cggcgagggt  
 3781 atagcagggg tagcctgctt tcgccccggc ccatttccta cttgaaaggc tcctcggggg  
 3841 gtccgctgtt gtgcccacg gacacgcgg tgggcattt cagggcccg gtgtgcaccc  
 3901 gtggagtggc taaggcggtg gactttatcc ctgtggagaa cttagagaca accatgagat  
 3961 ccccggtgtt cacggacaaac tcctctccac cagcagtggc ccagagctc cagggtggcc  
 4021 acctcgatgc tcccacccggc acgggtaaaga gcaacaaagg cccggtcg tgcgcagecca  
 4081 agggttacaa ggtgttggtg ctcacccctt ctgtgtgc aacactggc ttgggtgctt  
 4141 acatgtccaa ggcccatggg gttgatctta atatcaggac cgggttgc acaattacca  
 4201 ctggcagccc catcacgtac tccacctacg gcaagttct tggcgcaccc ggtgtctcaag  
 4261 gaggtgttta tgacataata atttgtacg agtgcaccc cagggatgcc acatccatct  
 4321 cgggcacatcg gactgtcctt gaccaaggacg agactgcggg tcttgcgtg tctgtcatcc  
 4381 ccaactgtac ccctccgggc tccgtcaactg tgcccattcc taacatcgag gaggttgctc  
 4441 tgccaccac cggagagatc cccttttacg gcaaggctat cccctcgag gtatcaagg  
 4501 ggggaagaca tctcatcttc tgccactcaa agaagaagtg cgacgacgc gccgcgaagc  
 4561 tggcgttccat gggcatcaat ggcgtggctt actaccggg tcttgcgtg tctgtcatcc  
 4621 cgaccaggcg cgttgcgtgc tccgtgtca cccatgtct catgactggc ttaccggcg  
 4681 acttcgactc tggtatagac tgcaacacgt gtgtactca gacagtgc ttagccttg  
 4741 accctacattt taccatttag acaaccacgc tccccccaggaa tgctgtctcc agactcaac  
 4801 gcccgggcag gactggcagg gggaaaggccag gcatctataatg atttgtggca cccgggggagc  
 4861 gcccctccgg catgtcgac tcgtccgtcc tctgtgatgt ctatgacgcg ggtgtgtctt  
 4921 ggtatgagct cacgcccggc gagactacag ttaggctacg aacgtacatg aacacccccc  
 4981 ggcttcccggt gtgcaggac catcttggat tttgggaggg cgtcttacg ggcctcaactc  
 5041 atatagatgc ccacttcta tcccagacaa agcagagtgg ggagaacttt ctttacactgg  
 5101 tagcgtacca agccacccgtg tgcgttaggg ctcaagcccc tccccccatcg tgggaccaga  
 5161 tgcggaaatg tttgtatccgc cttaaaacca ccctccatgg gccaacaccc ctgctataca  
 5221 gactgggcgc tggtcaaat gaagtcaccc tgacgcaccc aatcacaaaa tacatcatga  
 5281 catgcacgtc ggccgacctg gaggtcgatca cgacgcaccc ggtgctcg tgcggcgtcc  
 5341 tggctgtctt ggccgcgtat tgcctgtcaaa caggctgcgt ggtcatatgt ggcaggatcg  
 5401 tcttgtccgg gaagccggca attataccctg acagggaggt tcttaccatcg gagttcgatg  
 5461 agatggaaga gtgctctcag cacttaccgt acatcgacca agggatgatg ctcgctgagc  
 5521 agttcaagca gaaggccctc ggccctctgc agaccgcgtc cgcacatgca gaggttatca  
 5581 cccctgtgtt ccagaccaac tggcagaaaac tcgagggttt ttgggcaag ccatgtgg  
 5641 atttcatcag tggatataaa tacttgggg gcctgtcaac gtcgcgtt aaccccgcca  
 5701 ttgttcttattt gatggctttt acagtgccg tcacccatgg actaaccact ggccaaaccc  
 5761 tcctcttcaa catatgggg ggttgggtgg ctggccatgg cggccccc ggtgccccta  
 5821 ccgccttgcgtt gggcgtggc ttagctggcg ccgcactcga cagcgttga ctggggagg  
 5881 tcctcggttgcgtt ggtatggcg cggcggtggc gggagcttt gtggcattca  
 5941 agatcatgag cggtgagggtc ccctccacgg aggacctggt caatctgtg cccgcaccc  
 6001 tctcacctgg agcccttgcac gtcgggtgtgg tctttgcatt aataactgcgc cggcgttgg  
 6061 gcccgggcga gggggcagtg caatggatga accggctaat agccttcgc tcccggggga  
 6121 accatgtttc ccccacacac tacgtccgg agagcgatgc gccgcggcgtc gtcactgcca  
 6181 tactcagcag cctcactgtt aacccagctcc tgaggcgact gcatcagtgg ataagctcg  
 6241 agtgttacac tccatgtctcc gtttgcgttgc taaggagat cttttgcgc gttggactgg  
 6301 tggtgaggca cttaaagacc tggctgaaag ccaagctt ggcacaactg cctgggattc  
 6361 ctttgcgttgcgtt gggatggcg ggtatgggg gggcttggcg aggagacggc attatgcaca  
 6421 ctcgttgcgtt ggttgcgttgcgtt gacatgtcaaa aacaggacg atgaggatcg  
 6481 tcggtccttag gacctgcaag aacatgtgga gtggacgtt cttcatatgcacca

36/38

*Fig. 14C*

6541 cgggccccctg tactcccctt cctgcgccga actataagtt cgcgctgtgg agggtgtctg  
 6601 cagaggaaata cgtggagata aggccgggtgg gggacttcca ctacgtatcg ggcattgacta  
 6661 ctgacaatct caaatgcccg tgccagatcc catgcccga atttttcaca gaattggacg  
 6721 gggtcgcct acataggttt gcgcggccctt gcaagccctt gctgcgggag gaggtatcat  
 6781 tcagagtagg actccacgag taccgggtgg ggtcgcattt accttgcag cccgaaccgg  
 6841 acgttagccgt gttgacgtcc atgctactg atccctccca tataaacagca gaggcggccg  
 6901 ggagaaggtt ggcgagaggg tcacccctt ctatggccag ctccctggct agccagctgt  
 6961 ccgctccatc tctcaaggca acttgacacc ccaaccatga ctccctgac gccgagctca  
 7021 tagaggctaa cctcctgtgg aggcaggaga tggcgccaa catcaccagg gttgagtca  
 7081 agaacaaaat ggtgattctg gactccctcg atccgcttgc ggcagaggag gatgagcggg  
 7141 aggtctccgt acccccgagaa attctgcgga agtctcgag attcgccccca gccctgccc  
 7201 tctggcgcgc gcccggactac aacccctgc tagtagagac gtggaaaaag cctgactacg  
 7261 aaccacctgt ggtccatggc tgcccgcttccac cacttccacg gtccctctt gtgcctccgc  
 7321 ctcggaaaaaa gcgtacgggt gtcctcaccg aatcaaccctt acctactgcc ttggccgagc  
 7381 ttgcccaccaa aagttttggc agtcctcaa ctccggcat tacggcgcac aatacgacaa  
 7441 catcctctga gcccggccct tctggctgcc ccccccggactc cgacgtttag tcctatttt  
 7501 ccatgcccccc cctggagggg gaggctgggg atccggatct cagcagcggg tcatggtcga  
 7561 cggtcagttag tggggccgac acggaaatgt tcgtgtgtcg ctcaatgtct tattcctgga  
 7621 caggcgcact cgtcaccccg tgcgtcgaa agaaacaaaaa actgcccattt aacgcactga  
 7681 gcaactcgtt gctacgccc cacaatctgg ttttgcacccat cacttcacgc agtgcgttgc  
 7741 aaaggaagaa gaaagtccaa ttttgcacccat ttttgcacccat ttttgcacccat  
 7801 tgctcaagga ggtccaaagca gcccggccgttttgcacccat ttttgcacccat ttttgcacccat  
 7861 aagtttgcacccat ttttgcacccat ttttgcacccat ttttgcacccat ttttgcacccat  
 7921 acgtccgtt ccatgccaga aaggccgttttgcacccat ttttgcacccat ttttgcacccat  
 7981 tggaaagacag tgtaaacacca atagacacta ccatcatggc caagaacggg gttttctgc  
 8041 ttcagcctga gaaggggggt cgtaaggccag ctcgtctcat cgttttttttgcacccat  
 8101 tgcgcgtgtg cgagaagatg gcccgttacg acgtgggttag caagctcccc ttggccgtga  
 8161 tgggaagctc ctacggattt caataactcac caggacagcg gtttgcacccat ttttgcacccat  
 8221 cgtggaaatgc caagaagacc cccatccatcg ttttgcacccat ttttgcacccat ttttgcacccat  
 8281 cagtcaactga gagcggacatc cgtacggagg aggcaattt ccaatgttgc gacctggacc  
 8341 cccaagcccg cgtggccatc aagtccctca ctggagggct ttatgttggg gccccttta  
 8401 ctaattcaag gggggaaaaac tgcggctacc gcagggtcccg cgcgacgaga gtactgacaa  
 8461 ctatgttgg taacacccttc actcgctaca tcaaggcccg ggcagccctgt cgagccgcag  
 8521 ggctccaggta ctgcaccatg ctcgtgtgt gcgacgactt agtcgttattc ttttgcacccat  
 8581 cgggggttcca ggaggacgcg gcgagcctga gaggcttccac ggaggctatg accaggact  
 8641 cggccccccc cggggaccgg ccacaaccag aatacgactt ggagcttata acatcatgtct  
 8701 cctccaacgt gtcagtcgccc cacgacggcg ctggaaagag ggtctactac ttttgcacccat  
 8761 accctacaaac cccctcgcc agagccgtt gggagacagc aagacacact ccagtcaatt  
 8821 cctggcttagg caacataatc atgttttgcacccat ccaactgttgc ggcgaggatg atactgtatga  
 8881 cccacttctt tagcgtccctc atagccaggatg atcagcttgc acaggcttcc aactgcgaga  
 8941 tctacggacg ctgcgtactcc atagaaccat tggatctacc tccaaatcatt caaagactcc  
 9001 atggcctcaag cgcattttca tcccaatctt actctccagg tggaaatataat agggtggccg  
 9061 catgcctcaag aaaacttggg gtcccgccct tgcgagcttgc gagacaccgg gcctggagcg  
 9121 tccgcgttag gcttttgcacccat agaggaggca aggtgcacccat atgtggcaag tacctcttca  
 9181 actggggcaat aagaacaaaat ctcacactca ctccgataac ggccgcttgc cggctggact  
 9241 ttttgcacccat ttttgcacccat ggctacagcg gggagacat ttttgcacccat ttttgcacccat  
 9301 cccggcccccc ctttttttttgcacccat ttttgcacccat ttttgcacccat ttttgcacccat  
 9361 ttccctccaa ccgcatttttttgcacccat ttttgcacccat ttttgcacccat ttttgcacccat

*Fig. 14D*

37/38

MSTNPKPQRKTKRNTNRRPQDVKFPGGGQIVGGVYLLPRRGPRL  
 GVRATRKTSERSQPRGRQQPIPKARRPEGRTWAQPGYPWPLYGNEGCGWAGWLLSPRG  
 SRPSWGPTDPRRRSRNLGKVIDTLTCGFADLMGYIPLVGAPLGAARALAHGVRVLED  
 GVNYATGNLPGCSFSIFLLALLSCLTVPASAYQVRNSSGLYHTVNDCPNSSVVYEAAAD  
 AILHTPGCVPCVREGNASRCWAVTPTVATRDGKLPTTQLRRHIDLLVGSATLCSALY  
 VGDLCGSVFLVGQLFTFSRHHWTQDCNCISIYPGHITGHRMAWNMMMNWSPTAALVV  
 AQLLRIPOAIMDMIAGAHGVLAGIKYFSMVGWNWAKVLVVLFFAGVDAETHVTGGNA  
 GRTTAGLVGLLTPGAKQNIQLINTNGSWHINSTALNCNESLNTGWLAGLFYQHKFNSS  
 GCPERLASCRRLTDFAQGWGPISYANGSGLDERPYCWHYPPRPCGIVPAKSVCVPYC  
 FTPSPVVVGTTDRSGAPTYSWGANDTDVFVLNNTRPLGNWFECTWMNSTGFTKVCGA  
 PPCVIGGVGNNTLLCPTDCFRKYPEATYSRCGSGPRITPRCMVDYPYRLWHYPCTINY  
 TIFKVRMYVGGVEHRLEAACNWTRGERCDLEDRDRSELSPLLSTTQWQVLPCSFTTL  
 PALSTGLIHLHQNIQDVQYLYGVGSSIASWAIKWEYVVLFLLLADARVCSCLWMMLL  
 ISQAEAALENLVILNAASLAGTHGLVSFLVFFCFAWYLKGRWWPGAVYALYGMWPLL  
 LLLALPQRAYALDTEVAASC GGVLVGLMALTLS PYYKRYISWCWWLQYFLTRVEAQ  
 LHVVWPPLNVRGGRDAVILLTCVVHPALVDITKLLAIFGPIWILOQASLLKVPYFVR  
 VQGLLRICALARKIAAGGHVQMAIIKLGALTGTCVYNHLAPIRDWAHNGLRDLAVAVE  
 PVVFSRMETKLITWGADTAACGDIINGLPVSARRGQEILLGPADGMVSKGWRL LAPIT  
 AYAQQTRGLLGCIIITSLTGRDKNQVEGEVQIVSTATQTFLATCINGVCWTVYHGAGTR  
 TIASP KGPVIQTYTNVDQDLVGWPAPQGSRSLTPCTCGSSDLYLVTRHADVIPVRRRG  
 DSRGSLLSPRPISYLGSSGGPLLCP TGAVGLFRAAVCTRGVAKAVDFIPVENLETT  
 MRSPVFTDNSSPPAVPQS FQVAHLHAPTGSGKSTKVPAAYAAGYKVLVLPNSVAATL  
 GFGAYMSKAHVDPNIRTGVRTITTGSPITYSTYGF LADAGCSGGAYDIIICDECHS  
 TDATSISGIGTVLDQAETAGARLVLATATPPGSVTVSHPNIEEVALSTTGEIPFYGK  
 AIPLEVIKGGRHLIFCHSKKKCDELAALKVALGINAVAYYRG LDVSVIPTSGDVVVVS  
 TDALMTGFTGDFDSVIDCNTCVTQTVDFSLDPTFTIETTL PQDAVSRTQRRGRTGRG  
 KPGIYRFVAPGERPSGMFDSSVLC ECYDAGCAWYE LTPAETTVRLRAYMNTPGLPVCQ  
 DHLGFWEGVFTGLTHIDAHFLSQTKQSGENFPYLVAYQATVCARAQAPPSWDQMRKC  
 LIRLKPTLHGPTPLLYRLGAVQNEVTLTHPITKYIMTCMSADLEVVTSTWVLVGGVLA

*Fig. 14E*

38/38

ALAAYCLSTGCVVIVGRIVLSGKPAIIPDREVLYQEFDEMEECSQHLPYIEQGMMLAE  
QFKQKALGLLQTASRHAEVITPAVQTNWQKLEVFWAKHMWNFISGIQYLAGLSTLPGN  
PAIASLMAFTAATSPLETTGQTLLFNILGGWAAQLAAPGAATAFGAGLAGAALDSV  
GLGKVLVDILAGYGAGVAGALVAFKIMSGEVPSTEDLVNLLPAILSPGALAVGVVFAS  
ILRRRVGPGEHAVQWMNRLLIAFASRGNHVSPHYVPESDAARVTAISSLTVTQLLR  
RLHQWISSECTTPCSGSWLDIWDWICEVLSDFKTWLKAKLMPQLPGIPFVSCQRGYR  
GWWRGDGIMHTRCHCGAEITGHVKNGTMRIVGPRTCKNMWSGTFFINAYTTGPCTPLP  
APNYKFALWRVSAEYVEIRRVGDFHYVSGMTTDNLKCPCQIPSPEFFTLDGVRLHR  
FAPPCKPLLREEVSFRVGLHEYPVGSQLPCEPEPDVAVLTSMLTDPSHITAEAAGRLL  
ARGSPPSMASSSASQLSAPSLKATCTANHDSPDAELIEANLLWRQEMGGNITRVESEN  
KVVIILDSFDPLVAEEDEREVSVAEILRKSRRFAPALPVWARPDYNPLLVTWKKPDY  
EPPVVGCPPLPPRSPPVPPPRKKRTVVLTESTLPTALAELATKSFGSSSTSGITGDN  
TTTSEPAJPGCPPSDVSYSSMPPLEGEPGDPDLSGSWSTVSSGADTEDVVCCSM  
SYSWTGALVTPCAAEEQKLPIINALNSNLLRHNLVYSTTSRSACQRKKVTFDRLQVL  
DSHYQDVLKEVKAAASKVKANLLSVEEACSLAPPHSAKSKFGYGAKDVRCHARAKAH  
INSVWKDLLEDSVTPIDTTIMAKNEVFCVQPEKGGRKPARLIVFPDLGVRVCEKMALY  
DVVKLPLAVMGSSYGFQYSPGQRVEFLVQAWKSKKTPMGLSYDTRCFDSTVTESDIR  
TEEAIIYQCCDLDQARVAIKSLTERLYVGGPLTNSRGENCGYRRCRASRVLTTSCGNT  
LTRYIKARAACRAAGLQDCTMLVCGDDLVVICESAGVQEDAASLRAFTEAMTRYSAPP  
GDPPQPEYDLELITSNSNVSAHDGAGKRVYYLTRDPTTPLARAAWETARHTPVNSW  
LGNIIMFAPTLWARMILMTHFFSVLIARDQLEQALNCEIYGACYSIEPLDLPIIQLR  
HGLSAFSLHSYSPGEINRVAACLRKLGVPPLRAWRHRAWSVRARLLARGKAAICGKY  
LFNWAVRTKLKLTPITAAGRLLSGWFTAGYSGGDIYHSVSHARPRWFWFCLLLAAG  
VGIYLLPNR"

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